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RISK-TAKING BEHAVIOUR IN ADOLESCENTS

BY

TRACY NESBITT

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A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of MASTER OF EDUCATION

IN

COUNSELLING PSYCHOLOGY

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

FALL 1994

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FACULTY OF GRADUATE STUDIES AND RESEARCH

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submitted by

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in partial fulfillment of the requirements for the degree of Master of Education in Counselling Psychology.

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Abstract

A large number of adolescents engage in risk-taking behaviour such as drug use, drinking and driving, and early unprotected intercourse. Much research has been done to examine the multifaceted, highly complex nature of risk-taking. Although a host of interdependent, personality, cognitive, biological, and social contextual variables have been uncovered, to date there is no comprehensive theoretical or clinical basis for understanding why teenagers choose to participate in activities with uncertain outcomes. In this study adolescent risk-taking is reviewed and analyzed from several developmental theoretical positions: Jessor's problem behaviour perspective, Baumrind's theory of risk-taking as normal and adaptive, and Arnett's view of risk-taking as a function of adolescent egocentrism and sensation-seeking. As part of the analysis, it is argued that much of the extant adolescent risk-taking literature has focused on cognitive immaturity, social maladjustment, or pathological dysfunction and has neglected the possibility of normal, healthy identity exploration as an explanation for risk. An alternative view of risk-taking is proposed that counters widely held beliefs regarding adolescents' risky behaviours. Specific attention is given to drug and alcohol use and early unprotected intercourse. Family therapy is discussed as a valuable means of assisting typical adolescent-family systems in transition who are having difficulties dealing with risk-taking adolescents. In conclusion, the notion of risk-taking as a purposive, well-intentioned attempt at self-discovery is reiterated in an effort to redirect future investigations and to refine the concept of adolescent health in the context of contemporary youth culture.

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And thank God I'm finished!

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CHAPTER 1

Introduction

Overview of Current Theory and Research

Much of contemporary adolescent research acknowledges the heightened propensity for problem, risk, or reckless behaviour during this developmental period (Jessor, 1992; Donovan & Jessor, 1985; Arnett, 1992, Baumrind, 1987; Quadrel, Fischhoff & Davis, 1993). Although the notion of adolescence as an inevitable time of storm and stress has been effectively disputed (Hill, 1992; Offer, Ostrov & Howard, in Puckett & Reese, 1993), it is well recognized that adolescents experience the negative outcomes of some risk behaviours to a disproportionately high degree, and as such are over-represented in virtually every category of risk-taking behaviour.

Risk-taking is a highly complex enterprise of adolescents. Several problems exist when one attempts to untangle its etiological web. First and foremost, the construct *risk*, seems intractable to consensual definition among researchers, social policy makers, parents, teachers, and even adolescents. For instance teens often view their risk-taking simply as experience-seeking (Furby & Beyth-Marom, 1992) while parents tend to consider it a more serious symptom of dysfunction (Kirschner & Kirschner, 1986)

Traditionally, researchers have held conflicting views on the nature of risk. For example, one researcher's description suggests risk to be "a selection of one alternative or course of action from among many in which the consequences of that choice could the leave the individual in a worse position that if he had selected otherwise or not selected at all" (Bem, 1971, p.5). Others refer to risk as *any* behaviour that may jeopardize physical health and the successful accomplishment of life skills, regardless of the possibility of positive outcomes. Another writer has a different perspective. Writing on the topic of risk-taking behaviour and from a more humanistic stance, Tomkins (1971) asks us to consider that "without risk in the pattern of human living there can be no fulfillment; no distinctively human kind of life. Risk-taking... is a critical and important part of being a human being..." (p.24). Although there is little consensus, there is a recent trend in the literature towards acceptance of risk as a normative adolescent expression (Baumrind, 1985). However, even though it is reported more often as typical behaviour of adolescence it is not readily acknowledged to be representative of a healthy psychosocial developmental process or that there is the possibility of incurring positive outcomes as a result of experimental risk-taking. Moreover, there appears to be little agreement as to who holds responsibility for the inception of risk-taking, its continuation, and cessation. To sum up the direction of much of the investigative process, it appears that questions about culpability, antecedents, correlates, and negative outcomes, as well as efficacy of extant prevention programs underlie many of the existing research efforts.

The framework of current investigations generally embodies a developmental, psychosocial interactionist perspective (Arnett, 1992; Jessor, 1992; Smith, 1989). By most accounts this approach seems to attempt an inclusive explanation of the multifaceted nature of adolescent risk behaviours. It is within this more comprehensive paradigm that I will attempt to identify and detail the construct risk as it relates to normal adolescent development.

The Purpose of This Thesis

The overall objective of this thesis is to suggest an alternative view of adolescent risk-taking behaviour. I am pursuing an idea that many adolescents who engage in risky behaviours such as early unprotected intercourse, smoking, drinking and driving are healthy, well adjusted, individuals who are actively and purposively seeking to successfully accomplish the fundamental tasks of this developmental period, namely identity achievement and individuation. Although teenagers may go about this process in unconventional ways and often with health endangering consequences, I propose that engaging in risk-taking is motivated by an inherent search for self-discovery, self-improvement and self-actualization. At the same time, however, it is critical to recognize that regardless of adolescents' motivation to define their identity, they are naturally encumbered by the nature of this developmental stage. In other words, cognitive immaturity, which includes a lack of formal reasoning ability, a limited and fluctuating ability to formulate propositional reasoning and to generate hypotheses, as well as relative egocentrism all contribute to adolescent perception of invulnerability and invincibility (Arnett, 1992; Elkind, 1967; Mitchell, 1992). Furthermore, personality constructs such as unconventionality and impulsivity and biological influences such as hormonal changes also contribute to high levels of sensation -seeking (Jessor & Jessor, 1977; Arnett, 1992; Hill, 1992). Both sensation-seeking and the notion of invulnerability account for much of the current developmental explanations for adolescent risk-taking behaviour. In adding a motivational dimension which recognizes the quest for identity achievement and development of autonomy, I attempt to go beyond the developmental positions on risk behaviour and to challenge the frequently cited idea that risk-taking is symptomatic of adolescent dysfunction.

In order to accomplish this task, I have chosen to examine several dimensions of risk taking. To set the stage for the possibility of a viable alternative to the present theoretical notions of risk, I begin, in chapter two, with a review and critique of selected theories of risk-taking. Within a developmental contextual lens, this chapter gives a detailed account of the strengths and weaknesses of the propositions proffered by developmental theorists such as Arnett (1992), Jessor & Jessor (1977), Baumrind (1987). Further, it includes a description and commentary about the empirical and theoretical explanations of risk preference vis a vis motivational theory, universal psychophysical theories and decision-making models. I conclude the chapter with my sketch of risk and views of risk behaviour in relation to adolescent health.

Following chapter two, I dedicate the proceeding two chapters to an in-depth look at particular risk behaviours. Specifically, in chapter three, I examine current trends in drug use among adolescents. The purpose of this chapter is to provide some understanding of drug use in the context of both Canadian and American cultures. A clear distinction is made between drug use and abuse in an effort to better understand the nature of risk factors associated with type and degree of substance use. Personality correlates, family, peer and societal influences are discussed as factors associated with drug experimentation. As well, two developmental models are reviewed in terms of their contribution to an understanding of teenage drug use.

In chapter four, I focus on trends in adolescent sexual risk behaviours, including contraceptive practices and pregnancy. Attention is given to epidemiological and demographic trends within Canada as compared to other industrialized nations. Key personality, cognitive, biological, and sociocontextual influences central to the understanding of adolescent sexual attitudes and contraceptive practices are explicated. Methodological approaches and limitations of research on adolescent sexual behaviour are also examined. In concluding chapter four, I suggest the use of a social learning model to expand upon our existing knowledge of sexual risk-taking.

In an effort to provide the beginning therapist with a place to start when counselling families with adolescent risk-takers, I begin chapter five with a review of developmental tasks central to adolescence: autonomy, identity achievement, and individuation. The primary goal of this chapter is to promote family health during adolescent transitions. In pursuit of this idea, I respect and promote the view that adolescents who risk are not necessarily pathological or deviant. Moreover, I recommend the family systems approach to assessment and treatment and highlight several effective techniques to working with adolescent-families. As part of the assessment process I consider the clinical value of Marcia's (1977) identity status model in deciphering adolescent's risk behaviour in relation to family functioning.

In the final integrative chapter, I reiterate the developmental theories and empirical findings related to risk taking in general and to drug and alcohol use and sexual risk-taking in particular. Special emphasis is given to the primary idea which is threaded through this discourse. Notably, it is in the best interest of adolescent growth and development to re-examine risk-taking in a new light with more focus on its positive psychosocial intentions and outcomes.

CHAPTER 2

Theoretical Perspectives of Adolescent Risk-Taking Behaviour

It is the purpose of this chapter to critique a selection of the commonly cited theoretical views of risk-taking behavior in the extant adolescent development literature and to propose an alternate perspective. Much of the current risk-taking literature presents a somewhat cynical position suggestive of underlying adolescent pathology, identity diffusion, social deviance, moral weakness, family dysfunction, or cognitive immaturity. For instance, risk-taking has been described as a syndrome of behaviours referred to as problem behaviour (Jessor & Jessor, 1977). As well, risk behaviour is considered a consequence of egocentric thought or sensation-seeking (Arnett, 1992).

Even though there are compelling clinical and empirical arguments for risk-taking as a symptom of emotional and personality disturbance, this author takes a more optimistic, perhaps a more respectful stance. It is my belief that risky behaviour is not, necessarily a manifestation of underlying pathology. In fact it is my contention that much of adolescent risk behaviour can also be viewed as an active demonstration of the complexities of normal and healthy adolescent development. In the quest to actualize a set of values and to establish a defined identity within ever-changing, competitive social contexts, it is plausible that teenagers engage in some or many forms of risk-taking. To say it another way, I consider risk behaviour to serve an adaptive, exploratory function; one that is motivated, not by destructive desires, but by an intrinsic effort to discover and define the parameters of one's developing identity. Ultimately, it may be that the act of risking allows some adolescents to develop into competent and responsible persons in society.

Risk: Towards a Definition

In the most simplistic terms the notion of risk refers to uncertainty, the unknown, the possibility of loss, failure, challenge, and threats to personal security. For example, Bem (1971) posits risk to be "a selection of one alternative or course of action from among many in which the consequences of that choice could leave the individual in a worse position than if he had selected otherwise or not at all" (p.5). Yet when taking a risk, there is also the possibility of positive outcomes, of reward, benefit, personal growth, and achievement. After all, many successful, enterprising adults were once risk-taking adolescents. In scrutinizing the current descriptions and explanations of adolescent risk behaviour there is, unfortunately, considerable emphasis on its dysfunctional origins and negative outcomes. There is minimal mention, if any, of the likelihood of positive function of risk, or the perceived or actual benefits incurred by taking risks. Such a narrow position creates a large gap in our knowledge of adolescent risk-taking and our perception of adolescent health.

In order to formulate a clearer understanding of risk one has to establish it in relation to an individual's values and perceptions and determine a reference point from which both loss and gain are measured (Furby & Beyth-Marom, 1992). This is not an easy task, as the dynamics of this process are extremely labile and complex. Among the many complexities of the term is determining whose subjectivity is to be referenced. For example, a parent may have an entirely different perception of risk-taking than his or her adolescent. An adult may believe that a teenager's drug use is an example of harmful, dangerous, irresponsible behaviour. However, a teenager may see drug use as a legitimate coping behaviour or one that satisfies his immediate need to experiment, to seek thrills, to avoid personal pressures, or to enjoy a sense of belonging to a peer group.

Adding to the challenge of defining risk is the fact that even among adolescents there is little consensus as to what constitutes risk. Some teenagers might find experimenting with drugs to be somewhat risky while others may see it as very risky and others may not foresee any risk.

Not only does there have to be consideration of individual processes but also aspects of the particular risk and of the social context in which risky decisions are made. Teenagers will often comment on the first time that they inhaled a cigarette or smoked marijuana. When recalling a risky event, it is not always clear if it was the actual behaviour that was risky for them or if it was the social context in which the behaviour occurred that holds more salience for the adolescent. In other words, the risk may have been participating in an activity such as smoking while others observed or while parents were in the house, rather than the physical act of inhaling a cigarette.

Overarching the above mentioned issues are the dual opposing views of human nature. Freud (1920) wrote of Eros and Thanatos, in his essay Beyond The Pleasure Principle. In effect, he believed in the existence of two instincts: Eros and Thanatos, or the destructive instinct. Briefly, the aim of Eros is self-preservation and preservation of the species while the aim of Thanatos is to return man to an inorganic, earlier state, or death. There are those who hold the view proposed by Freud that people are inherently driven to self-destruct. Conversely, there are those who believe that the human survival instinct is manifested as a drive toward health and fulfillment of potential. It is not my intent to debate these issues, only to present them in the context of defining risk and risk preference and to point out by way of illustration the difficulty in understanding even its basic premises.

In highlighting some of the philosophical and pragmatic difficulties in analyzing risk, I propose an expansion of the construct as it applies to adolescents. A more comprehensive definition should include not only the chance of loss or failure but the possibility of positive outcome. Moreover, let's also assume that it involves a type of decision-making that is influenced by the active, purposive searching for individuation and identity. Perhaps, from this rudimentary beginning we might become better equipped to answer some important questions as they relate to adolescents' perception of and actual risk behaviour. Notably, why do adolescents risk in the first place? Are they trying to convey a message? Does it serve a worthwhile function? What are the criteria for defining levels of risk? Is it any different than adult risk? What role do mental health care professionals, families, friends and society at large play in risk inception, continuation, and cessation? The following sections attempt to answer these questions by focusing on another piece of this multifaceted puzzle; that which is concerned with theoretical explicatives of adolescent risk-taking behaviour.

Problem Behaviour Theory of Risk-Taking

One major theory that has been applied to risk-taking behaviour is Jessor and Jessor's (1977) problem-behaviour theory. Although one might object to the label *problem*, as it seems to connote the idea of deviance or maladjustment, there are some basic tenets of this theory that link risk-taking to normal developmental processes. Problem behaviour has been defined as, "behaviour that is socially defined as a problem, a source of concern, or as undesirable by the norms of conventional society... and its occurrence usually elicits some kind of social response" (Jessor & Jessor, 1977, p. 33).

Interestingly, these authors originally determined risk behavior to reflect a personality disorder or social maladjustment (Lavery, Siegel, Cousins & Rubovits, 1993). More recently, however, Jessor and his colleagues have revised their earlier, predominantly clinical perspective. From a more interactionist, psychosocial framework, they currently purport that biological risk factors, personality characteristics, and purposeful behaviours interact with and affect social contextual variables in determining risk.

Primarily on the basis of the early work of Jessor and Jessor (1977) and relying on self-report measures and correlational analyses, Donovan and Jessor (1985) and Jessor (1992), in a series of convergent studies, have identified five interrelated sources contributing to adolescent risk. These domains include: biology/genetics, the social environment, the perceived environment, personality, and behaviour. It is a complex structural schema, that recognizes the indirect and direct interactions and effects of each risk factor on behaviour.

For instance, an individual's drinking or drug behaviour can compromise physical or mental health and social opportunities. By way of a simplified illustration, picture an adolescent, who from a biomedical view may be considered to have a genetic predisposition to alcoholism (genetic risk factor), and belongs to an impoverished or ethnic minority family (social environment risk factor). Suppose he suffers from low self-esteem (personality risk factor) and engages in drinking behaviour (adolescent behavioral/lifestyle factor). For the sake of argument, assume that his initial experimentation then proceeds to drug abuse, which increases his chances of morbidity or mortality. In tandem, personal relationships, scholastic opportunities, and future prospects become adversely affected (health/life compromising outcomes). Clearly, each domain holds a separate source of risk, yet can be mediated through other risk domains.

Perhaps one of this model's significant contributions to the exegesis of adolescent risk behaviour is the inclusion of social contextual and protective factors. In each of the risk domains exists protective factors which conceptually, serve to counter the possibility of risk. Examples from each domain might include: within the social environment, a functional family, and /or an available, caring adult; in the perceived environment, conventional peer role models; in the personality domain, low tolerance for deviance, high academic expectations and value on health; and in the behaviour domain, involvement in conventional activities such as church and school clubs. The notion of protective factors might help to explain the following: why all adolescents do not engage in unconventional risks; why some do not risk at all; and may provide some conceptualization of adolescent mental health across separate domains.

In his latest writings, Jessor (1992) contends that risk-taking behaviour can refer to any activity that might compromise adolescent physical development and social adaptation, regardless of motivation or level of awareness. In this regard, he neglects to discriminate those behaviours which are experimental, and more likely typical, such as initial drug use, from those which are more serious, and generally atypical, such as drug abuse. However, he does propose that the notion of risk be expanded to include not only negative but positive or desired outcomes. For example, he maintains that risk behaviours can be goal directed, purposive, and serve normal social and personal functions for adolescents. For example, behaviours such as alcohol use, cigarette smoking, marijuana and other illicit drug use, delinquent behaviour, and precocious sexual intercourse may be performed for any number of reasons such as: establishing autonomy from parents; gaining peer acknowledgment and respect; rebuking conventional values; demonstrating maturity; and coping with anxiety, fear or frustration. It is this descriptive effort that lends some support for the contention that adolescent risk behaviour may be a demonstration of normal teenage activity. In other words, engaging in risky behaviours for the above mentioned reasons may function as developmentally appropriate, constructive, self-regulating strategies for the adolescent in transition.

Two additional, important considerations of this theory relate to normal adolescent development. First, there is sufficient evidence that all of these different behaviours are found in samples from typical adolescent populations (Donovan & Jessor, 1985). Second, by way of a longitudinal study conducted with over 400 normal adolescents, Jessor and his colleagues have identified a constellation of concomitant risk behaviours or syndrome which may likely reflect an underlying factor, social and personal unconventionality, common to risk behaviour. In this study, evidence of unconventionality included placing less value on academic achievement and greater value on independence, valuing independence over achievement, having higher tolerance for deviance, and lower religiosity (infrequent church attendance). Further, unconventional adolescents reported less reliance on parents and more reliance on peers when formulating decisions (Lavery, Siegel, Cousins, & Rubovits, 1993).

In contrast, this study also uncovered a composite index of personality and social conventionality, leading to speculation that protective factors may attenuate risk-taking. As was mentioned earlier in the description of Jessor's model for adolescent risk behaviour, religiosity, greater intolerance for deviance, more conservative sociopolitical attitudes, fewer models for drug use, and more friend models for involvement with religion were among the factors found to be influential in protecting an adolescent from engaging in compromising behaviours. Although I am more interested in the potential benefits and normative functional role of risk-taking, in order to appreciate all of the complexities of risk behaviour, it is necessary to be aware of the protective factors that might influence the extent or degree to which an adolescent actively pursues or avoids risk.

In conclusion, the originators of problem behavior theory provide plausible explanations for adolescent risk and have generated extensive research in the area of risk and protective factors. For instance, the notion of a syndrome of risky behaviors has since received wide investigative attention. Numerous studies have revealed strong positive associations, across both gender and age: between substance use of any kind and early sexual activity (Donovan & Jessor, 1985; Dryfoos, 1990; Farrell, Danish & Howard, 1992); between illicit drug use and school drop out (Friedman, 1985); and a negative correlation between academic success and number of problem behaviours (Dryfoos, 1990). Additionally, within a 15 and 16 year old age cohort, data from the National Survey of Children (1981) shows very strong positive relationships between being sexually active and smoking, using alcohol, marijuana, having shoplifted and having run away. In effect, it is considerably more pragmatic to examine an organized structure of correlated behaviours when investigating causal relationships and designing appropriate interventions. One might have a better chance of understanding, if not modifying extreme risk behaviours if a more global orientation is considered. Unfortunately, to date much of the published research on covariant problem behaviours emanates from the United States. Canadian studies seem to reflect an interest in single rather than multiple risk behaviour trends.

Although Jessor's problem behavior theory provides solid evidence for overlapping risk behaviours and the value of protective factors, some confusion surrounds the role of unconventionality, viewed to be a causal agent in risk-taking. By implication, this theory argues that any unconventional behavior may compromise one's psychological and physical health. As such, too wide a conceptual net is cast over the entire rubric of adolescent risk. It is important to recognize that not all unconventional behaviour is risky or unhealthy and that not all conventional behaviour is healthy and risk free. For instance, unprotected intercourse may be the norm for a teen and his peer group, yet that does not necessarily minimize the health risks associated with such an activity. To assuage the confusion, I propose a more moderate stance. Although non-conforming behaviour can be problematic and health-endangering, it seems that, if looked at along a continuum of adaptive functioning, a certain, modest degree of unconventionality is less than harmful. In fact, as the following theory implies, unconventionality may accompany a healthy exploration process and foster social competence.

Risk-Taking as Normal and Adaptive

A developmental theory that places adolescent risk-taking in a functional light has been proposed by Baumrind (1987). In her attempt to understand the nature of some adolescents' failure to thrive in North America, Baumrind examined risk-taking in the context of contemporary youth culture and normal development.

In a cogent essay, she argued that risk-taking behaviour has come to characterize normal adolescent development. This author identified several socioeconomic, sociomoral, and developmental processes germane to teenage experimentation with drugs and sexual activity. Tracing the historical transitions within the American social climate, Baumrind claims that certain secular events have influenced individual development. For example, during the 1960's, problem behaviour such as drug use was, in part, a reflection of prevailing anti-authority, political attitudes. In the 1970's, drug use and early sexual activity became fairly conventional pursuits, further changing the traditional social ethos. By the 1980's and presently, in the 1990's sociomoral and socioeconomic realities profoundly, adversely impact the developing adolescent. Specifically, the depressed economy cannot employ all of it youth. As a result, the extended moratorium afforded to adolescents seems to delay entry in to the adult world of responsibility and commitment. Equally disruptive has been the role of the feminist movement. The traditional place of a mother in the home has been replaced by her presence in the work force. No longer having as much access to maternal consult or supervision, adolescents are left to their own devices; many of whom will engage in health-compromising activities.

Having highlighted the social platform conducive to adolescent risk taking, Baumrind goes further to identify adolescence proper as a naturally disequilibrating period ripe for all kinds of experiences; those that are both "dangerous and growth enhancing" (p.98). In this vein, risk-taking is conceptualized as means of coping with normal developmental tasks such as autonomy and exploration. In reviewing Baumrind's work, Lavery, Siegel, Cousins, and Rubovits (1993) interpret it to mean that "competence and identity formation results as a by product of experimentation with alternate life styles" (p. 279).

What is particularly appealing about this theory besides the suggestion that risk-taking is part of a healthy adolescent process, is the emphasis on the underlying issues of personal and social alienation, commitment, and parental involvement. In my view, Baumrind goes beyond problem behaviour theory and effectively discriminates simple experimentation from more deleterious risk-taking. For example, instead of condemning all drug experimentation, (as Jessor does) Baumrind acknowledges the potential benefits of some risk-taking. She writes "[T]he use of illicit substances offers young adolescents an opportunity to rebel against the rules their elders set down while simultaneously conforming with underlying parental attitudes [using drugs to relieve immediate or imminent discomfort]" (p.100). As well, she notes the differences between use and abuse, citing personal alienation and estrangement both as causal to and symptomatic of chronic use. What this means is that constructs other than unconventionality, such as social anomie, parenting styles, and peer involvement may play a role in the structure and organization among risk behaviours. And further, "risk-taking becomes destructive when it contributes directly and indirectly to the process of becoming alienated rather than to exploratory and experimental processes that are developmentally normal and preparatory to commitment" (p. 121). This statement may help clinicians to arrive at some quantifiable means of discriminating normal adolescent behaviour from more serious, atypical, pathogenic behaviour.

Following an interactionist line of reasoning, Baumrind sees family processes and social values as instrumental in the negotiations common to the adolescent transition. According to this line of reasoning, parents must make every effort to provide strong kinship bonds with their offspring in a climate of stability, consistency, and flexibility. A firm belief system, either traditional or nontraditional, and an ability to negotiate reasonable standards and limits are touted as critical to shielding adolescents from dysfunctional risk-taking. In a study designed to test this hypothesis, Baumrind (1991) and others have found that parenting styles tolerant of drug experimentation have been associated with healthy, competent adolescents, and that casual drug use was not a sign of pathogenesis in those children (Lavery, Siegel, Cousins, & Rubovits, 1993).

In sum, this perspective incorporates risk-taking within several contexts including: normal adaptive psychosocial functioning, proximal youth culture, distal social cultures, and biological, pubertal change. It is also an attempt to edify the complex interplay of all of these factors as they relate to normal transitional "exploratory" risk-taking. In my view, it is a theory that is both apposite to and extends the propositions of problem behaviour theory; both of which are predicated on the interaction of individual attributes with social ecological attributes and both of which acknowledge the costs and benefits of engaging in risk behaviours.

Egocentrism and Sensation-Seeking in Developmental Theory

A third developmental account of risk-taking is put forth by Arnett (1992). He prefers the term *reckless* to risk-taking as he considers recklessness to be more deleterious to health than the problem behaviors elucidated by Jessor and Jessor (1977; 1985, 1992). For example, sexual activity is not considered reckless unless contraceptive measures are not taken. Drinking is also excluded from this category if not accompanied by driving. In short, reckless behaviours carry a great potential for negative consequences including serious personal injury or death, unwanted pregnancy, arrest, or incarceration. However, Arnett believes recklessness to be a "common feature of the adolescent age period and not as aberrant or deviant behaviour and not as an indication of psychopathology" (p. 343).

To account, in part, for the existence of most forms of reckless behaviour, Arnett proposes the influence of two underlying factors, sensation seeking and egocentrism. As a dimension of personality, sensation-seeking is "characterized by the need for varied, novel, and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences" (Zuckerman, 1979, p.10). Arnett purports that, by virtue of their developmental stage, adolescents as a group are relatively high sensation seekers. He cites numerous studies confirming a high level of sensation-seeking as measured by the Sensation Seeking Scale (SSS) and sex without contraception, as well as high scores on the (SSS) and drug use. Common motives reported by teens for trying illegal drugs include "to see what it was like" and "out of curiosity", both of which Arnett views as indirect support for sensation-seeking. Additional support for the sensation-seeking motive was reported by Jessor (1987b). In his research investigating risk-taking while driving, he comments that this behaviour "may be part of a larger pattern of behaviour involving deliberate and intentional engaging in risk-taking for fun or thrills" (p.8.).

Of considerable interest is the biological basis of sensation-seeking, which in effect makes a claim for gender differences in physical types of risk-taking behaviour. For instance, males score higher on the SSS than females at all ages. There is also some empirical evidence connecting high testosterone levels in males to certain types of reckless behaviour such as drunk driving, vandalism, and drug use and to high scores on the SSS (Arnett, 1992).

Monoamine oxidase (MAO), an enzyme that is related to the synaptic sensitivity of neurons, has also been implicated in level of sensation-seeking and reckless behaviour. The higher the MAO level the less sensitive the neurons. Studies that have shown MAO levels to be negatively correlated with SSS scores have also demonstrated that high sensation-seekers tend to have low MAO levels and conversely, low sensation-seekers tend to have high MAO levels (Arnett, 1992).

As Arnett points out, there are psychometric limitations of the SSS undermining its empirical validity. Yet, there is compelling research and clinical evidence linking the theoretical construct, sensation-seeking to various forms of reckless behaviour and should not be discounted as a valuable piece to the complex puzzle.

Another developmental feature of adolescence implicated in Arnett's concept of recklessness is Elkind's (1967) theory of egocentrism. Elkind termed two constructs, hallmarks of the emerging formal operational thinking, *imaginary audience* and *personal fable*, as central to an adolescent's conviction of uniqueness, omnipotence, and invulnerability. The imaginary audience, for the most part, arises out of an adolescent's anticipation of how others will react to him or her in social situations and is based on the idea that others view him as he views himself. The adolescent believes that he is the focus of attention which is not always the case. Further, he is continually reacting to this imaginary audience (Mitchell, 1992). His reluctance to reveal himself and his desire for privacy may be a reaction to the feelings of being under intense scrutiny of others (Elkind, 1967).

The personal fable is an additional mental construction that Elkind (1967) sees as an adolescent's belief in personal uniqueness and immortality. Following this logic, it is conceivable that adolescents might not recognize the possibility of negative consequences of recklessness, or might distort (minimize) the probability of such occurrences happening to them. Although there is no empirical basis for this notion, it is also conceivable that teenagers may see only the advantages or positive outcomes occurring from engaging in reckless behaviour. Perhaps in their view it is a mark of independence or willingness to share with friends when teens buy their first package of cigarettes. As well, a teen may view the negative outcomes of a drinking related accident in a positive light. For instance being restricted by a wheel chair as a result of a car accident might be seen an inconvenience, easily overcome or managed.

Whether or not it is the workings of these cognitive factors, alone or in concert with other mitigating variables, there is empirical evidence for the role of egocentrism and probability misjudgment in adolescent sexual behaviours, and drinking and driving. For example, it has been reported in numerous studies that teens take greater risks when driving and estimate the likelihood of getting into an accident, drunk or sober, as lower than their peers (Finn & Bragg, 1986; Arnett, 1990a). Gerrard, McCann & Fortini (1993) found that unreliable contraceptive users or those who did not use contraception at all were more likely than effective users to underestimate their probability of getting pregnant.

Arnett (1992) maintains that adolescent probability reasoning, which is vulnerable to the distortion of egocentrism, has great implications for understanding recklessness. In defending his position that adolescent probability judgment is poor, Arnett relies on the heuristics, *representativeness* and *availability*, first proposed by Taversky and Kahneman (1973). Representativeness is defined as "the proclivity to judge an event as probable: to the extent that it represents the essential features of the parent population… When judging the probability of an event by representativeness, one compares the essential features of the event to those of the structure from which it originates" (Taversky & Kahenman, 1973, pp. 207-208).

What this translates to is that when teenagers consider the probability of an adverse effect from reckless behaviour that might happen to them, the probability distribution changes; this results in the belief that there is a weak probability of negative consequence. Interestingly, teens are often more accurate in the prediction of outcome for friends or anonymous others.

The availability heuristic suggests that "probability judgments are influenced by the ease with which relevant instances come to mind" (Arnett, 1992, p.351). In other words, an adolescent who has not had the recent experience of a car accident as a result of drinking and driving or becoming pregnant after unprotected intercourse, would not as a result, consider the likelihood of those events as occurring to them.

To extend his view of recklessness, Arnett expounds on the importance of one's socialization contexts. Similar to the ideas proffered by Baumrind (1985), environments with varying expectations of and responsibilities for its youth, as well as guidelines for acceptable conduct, and limitations for unacceptable behaviour, will influence the expression of reckless behaviour. For instance, according to this theory, in a culture or a family where adolescents have few responsibilities, loose standards of conduct, minimal sanctions against deviations from the norm, where independence and autonomy are promoted, there is a heightened propensity for sensation-seeking and egocentrism to be expressed as reckless behaviour. In contrast, more narrow socialization within a culture, community, and or family, is predicated on clear expectations for conduct and responsibility, restraint of indulgence, and low tolerance for deviation from the standard. Under this type of socialization, Arnett suggests there is either less tolerance for, or natural inclination not to engage in recklessness.

Strengths and Limitations of Developmental Theories

Comparing and contrasting these developmental theories is a difficult task as there appears to be subtle differences among them. Overall, there is an appreciation of the developmental trajectory of adolescence, and the interaction of person and context when accounting for risk-taking or reckless behaviour. Collectively, there is agreement that risk behaviours should be recognized as typical, if not a necessary accompaniment to healthy exploration. However, each perspective holds a different view of the antecedents or determinants of risk. While Jessor's problem theory considers unconventionality as underlying risk-taking, Arnett's perspective underscores the relative weight of sensation-seeking and cognitive immaturity. Baumrind views risk behaviour as a normative, adaptive effort to become socially competent yet she focuses on alienation, estrangement, and cultural anomie as causal to more extreme forms of risk and disastrous outcomes of risk behaviour. Jessor determines all forms of risk to be potentially health-endangering, thus preempting crisper demarcations of levels of risk. Although problem theory submits that adolescents generally engage in compromising activities in an effort to achieve an adult status, this hypothesis has yet to be empirically measured. However, the notion of a syndrome of problem behaviours is a significant contribution to the study of adolescent risk.

Arnett's proposition that egocentrism and personal fable play a central role in recklessness has also been found lacking. For example, in a study designed to test Elkind's (1967) theory, Enright, Lapsley, and Shukla (1979) developed an Adolescent Egocentrism Scale with a Personal Fable subscale. They found little difference in Personal Fable ratings of subjects in the 6th grade, the 8th grade, and college. As also reported by Quadrel, Baruch, Fischhoff, and Davis (1993), in a cross study comparison of archival data regarding the perceived threat of drug and alcohol problems, Millstein

(1993) found less evidence of invulnerability among adolescents than among college students.

In conclusion, risk behaviour seems intractable to a straightforward explanation. Each of the theories provides valuable insight in to the multifaceted nature of risk behaviour. Clearly, the similarities among them point to the relevance of social contextual factors and biological determinants. Moreover, the diverging views highlight the need for multidisciplinary research into what promotes a youngster to take risks. Perhaps then, collectively we can be better prepared to assist adolescents in developing a healthy life style.

Risk-Taking as Decision-Making

What the foregoing theoretical constructs do not thoroughly address is the examination of risk behaviour as an outcome of a n adolescent decision-making process. Jessor (1992) makes a claim that one function of teenage risky behaviour is pleasure or fun (Tonkin, 1987). This desire to counter boredom or routine, conceivably, could be labeled impulsive or irrational by most adult standards, thus implying poor or limited decision-making skills. With that view in mind, I come back to the questions posited at the start of this chapter. Is all teenage risk behaviour simply a function of irrational impulse or is it guided by rational choice; that is, making a choice which reflects the relevant values and beliefs of the decision maker? What are the purposeful motives for engaging in risky behavior? Conversely, what motivates adolescents to be risk averse? Presaging the actual behaviour, what factors influence the perception of risk? How is an adolescent's decision to engage in risky behaviours different from that of an adult? The following examination of risk choice attempts to bridge the earlier global definition of risk with adolescent decision-making and to address the above important set of questions related to adolescent risk perception and risk outcome.

Explanations of Risk Preference

Cognitive and economic explanations of risk choice generally fall into one of two classifications of decision-making; universal psychophysical, or individual-difference, motivational categories (Lopes, 1987). Two of the most frequently cited universal theories are the Cardinal Utility Theory and the Prospect Theory. Risky choice is explained in these approaches by way of a single internal process or mechanism which allegedly computes expected values and which ultimately guides decisions. Each of these psychophysical perspectives also explain risk preference as a by product of how people value objective outcomes.

Individual-difference theories depart from the universal theories; they propose that risk preference is a function of the characteristics of the individual (Larrick, 1993). Within the field of decision-making, three theories offer a conceptual framework for understanding individual differences in risk preference. These include expected utility theory, theory of achievement motivation (Atkinson, 1957) and Lopes's (1987) theory of security motivation. The most cited theory is the expected utility theory. Briefly, it is a comprehensive attempt to describe individual differences in feelings about risk, including risk aversion, risk seeking or risk neutral. Its most glaring weakness seems to be its lack of psychological explanations for individual differences in attitude or preference. As such, it is only superficially described here. A more comprehensive account of adolescent decision making about risk might be generated from the motivational theories of risk decision.

Motivational Theories of Risk Decision

The motivational theories attempt to account for risk preference vis a vis an underlying psychological structure. The basic premise of motivational theories is that people make choices about risk based on two competing desires; the emotional need to maximize the value of their outcome competes with the desire to avoid the feelings of failure and disappointment that come with making a poor or risky decision (Larrick, 1993). More specifically, Atkinson's motivational theory of risk-taking, which borrows from social psychology and personality psychology, suggests that it is the tension between the two motives that propels people to a certain level of risk. Atkinson noted that it is the differences in the extent to which people are motivated to achieve (or motivated to avoid failure) that also factors into the risk equation.

An additional, two factor motivational theory of risky decision-making, proposed by Lopes (1987) is concerned with personality factors, such as the need for security and a situational component, such as level of aspiration. According to this model, people who are motivated by the need for security focus on the worst possible outcomes for each alternative. Hence they tend to minimize their risk. People who favor the risky alternative are motivated by the beneficial potential of the risk and neglect to attend to avoiding loss. Preferences are a function of both the need for security and the aspirational level of an individual.

Given its focus on personality and social variables, the motivational approach to decision making seems, at first glance, to be a useful paradigm in which to examine adolescent risk taking decisions. Unfortunately, very little research has been done to study motivational components and affective states particular to younger samples (Maehr & Pintrich, 1993). Jacobs and Ganzel (1993) and Harter (1990) suggest that what likely motivates adolescents in the decisions they make is self. That is, constructs intimately connected to or reflective of self-investment, such as personal goals, attitudes, values, emotional states, and self-beliefs, impact information processing and choice outcome. Naturally, it is probable that, as a group, adolescent self-considerations are of a different sort than those of adults. However, let us not assume that the social, emotional, and developmental differences of youth renders them incapable of making competent decisions. If we can accept the argument that adolescents inhabit a subjective reality quite unlike an adult's reality, we might make headway into understanding decision making motives particular to this younger age group. Perhaps additional clues about adolescent choice can be uncovered by reviewing the decision-making process.

The Decision Making Process

What is involved in making a decision? A widely accepted normative model for how people should make decisions primarily draws on cognitive reasoning ability and defines it as the process of making choices among competing courses of action (Furby & Beyth-Marom, 1992). Contextual, motivational, and affective components are, for the most part, disregarded (Maehr & Pintrich, 1993). Many of the recent studies in this area have ignored the adolescent as a decision-maker (Small, Silverberg, & Kerns, 1993). Studies that do evaluate adolescent decision making skills use hypothetical dilemmas related to medical and psychological treatment; decision making and risk taking receives minimal attention. Briefly, the following steps are specified in the decision process:

1. Identify all of the possible options.
2. Identify the possible consequences that may follow from each of these options.
3. Evaluate the desirability of each of those consequences.
4. Assess the likelihood of those consequences.

5. Combine the above steps according to some *decision rule* in order to highlight the best option. Decision rules are based on the evaluation of both the desirability and likelihood of possible consequences, for maximizing one's well being (Furby & Beyth- Marom, 1992, p.3-4).

There is a large body of research designed to study how adults perform each of these steps (Fischhoff, 1988; Fischhoff, Svenson, & Slovic, 1987; Yates, 1990). It is from such analyses that many lay persons and researchers base their conclusions about adolescent decision-making. Overall, when comparing adult decision-making with adolescent decision-making from this paradigm, the limited literature provides a mixed and complex picture. It is likely that the confusion is further exacerbated by the fact that the reported judgments about possible consequences do not predict very accurately actual behaviour.

Basically, the research can be divided into two camps; one portrays adolescents as good decision-makers, equally as capable as adults, the other suggests that adolescents are poor decision-makers, in need of instruction (Jacobs & Ganzel, 1993). For example, in support of minimal differences between adults and adolescents decision capabilities, Beyth-Marom, Austin, Fischhoff, Palmgren, and Jacobs-Quadrel (1993) found similar response patterns for adults and adolescent subjects who were asked to list possible consequences of either accepting or refusing to participate in several risky behaviours. These results also provide evidence refuting the notion of teenage invulnerability, as youths in this study identified roughly the same possibilities as their parents. Along the same vein, Siegel, Cuccaro, Parsons, Wall, and Weinberg (1993) have shown that for some risk behaviours, adolescents perception of risk is even more accurate than their parents. For example, parents who smoked were more likely to report benefits and less likely to report risks for smoking, while their adolescents were more likely to report no benefits and a high number of risks. Thus, although adolescents may perceive a behaviour to be risky, it does not necessarily follow that they would refrain from engaging in the behaviour.

Primary support for the belief that teenagers are poor decision makers comes from statistics demonstrating that adolescents do drink and drive, do practice unprotected intercourse, and do experiment with illicit drugs. Refer to the chapters on drug use and sexual behaviour for specific references. Many adults engage in these hazardous activities too, yet it is generally assumed that adults have arrived at a decision based on rational choice. It is plausible, however that adults who take inordinate risks, such as drinking and driving or engaging in unprotected intercourse may be under the same illusion of invincibility often reserved for youth. However, it may also be that the consequences of an unplanned pregnancy are not perceived by adults to be as harmful for them as they may be for a teenager.

Other empirical findings do not buffer the notion that the decision making process of adults and adolescents are similar. In one of the few studies comparing decision-making skills, Gardner (1989) reported that 12 and 13 year olds used less information about options, consequences, and probabilities than adults. Urberg and Rosen (1987) found that both younger and older adolescents considered negative and positive consequences when formulating decisions about pregnancy resolution; however, older adolescents were able to generate alternate contingency plans and long term consequences.

The above examples do not make it any easier to understand the adolescent decision-making process or level of competence. Essentially teens do seem to possess the necessary knowledge about the dangers of unprotected intercourse, cigarette smoking, and illicit drug use. There is also ample evidence to suggest that teenagers are capable of processing information (Gardner & Herman, 1990) and for the most part, are no less capable than adults in estimating risk (Jacobs Quadrel, Baruch, Fischhoff, &

Davis, 1993). Furthermore, there is a growing body of research refuting the notion of teenage perception of invulnerability. Perhaps, then, as is suggested by the motivational theory of decision making, it is not simply a matter of cognitive skills or information processing abilities that determine choice. To rephrase an earlier message, perhaps the trade off between the benefits and costs of adolescent risk decisions is also directed by motivations; motivations that are qualitatively different than those of an adult. For example, a study by Kegeles, Adler, and Irwin (1988) found that 14 to 19 year olds reported intention to use condoms was not related to their beliefs about pregnancy or sexually transmitted disease. Rather, stated intentions were correlated with beliefs about the extent to which condoms are easy to use, popular with peers, and encourage spontaneous sex.

In sum, what little evidence there is it seems that teens do choose to participate in risky behaviours which are more likely to elicit what they perceive as positive rather than negative consequences (Furby & Beyth-Marom, 1992). Contrary to most adult held perceptions, adolescents may be attempting to improve, not sacrifice, their own well being. If that is the case then it might be more instructive to broaden the investigative process to include not only cognitive factors but also motivational and sociocontextual influences common to adolescents risk choice. As with the developmental theories of adolescent risk behavior outlined in this chapter, maybe what is also needed is a multifaceted developmental theory of decision-making; a theory that examines qualitative motivational, sociocontextual, and developmental constructs affecting the processes of adolescent decision-making and risk choice.

Towards a New View of Risk-Taking

To defend any theoretical position on adolescent risk-taking is not an easy task. It becomes even more challenging if the theory does not follow the more accepted or empirically tested line of reasoning proffered by developmental theorists and mental health clinicians. In suggesting that risk behaviours such as drinking and driving, drug use, and early, unprotected intercourse may be linked to healthy, normal, exploratory, and developmentally appropriate behaviour certainly does not fall into the generally accepted notions of adolescent risk behaviour as deviant or pathological. Yet, I am hoping that by articulating an alternate and more encompassing view of risk, it becomes possible to reexamine the construct in an optimistic light. The developmental theories presented in this chapter serve as a good place to start in the advancement of an alternative explanatory model for risk behaviour. If we could postulate even further and picture risk-taking as part of an adolescent's progressive and active search for an independent, mature, and flexible identity, in an ever-changing, complex world rather than as part of a self-destructive, defeating, dysfunctional pattern which has evolved as an abreaction to social anomie, peer pressure, or family breakdown, those of us who live with or work with adolescents would likely have a better chance of discovering and understanding their world view. If that can be accomplished, the next logical step is to refine the characteristics of adolescent psychosocial health to allow for some short-term experimentation with risky behaviour.

CHAPTER 3

Trends in Drug Use Among Adolescents

It is the purpose of this chapter to offer some understanding of drug use in early and late adolescents, particularly how it relates to, and affects normal development. To get a better idea of the global nature of this phenomenon, trends within the United States, Canada, and France are examined. I have chosen to look at epidemiological patterns in these three countries to point out the similarities and differences in adolescent drug use within and between these cultures. Although the focus of this discussion centers on correlates of initial involvement in substance use, I define and comment on the distinction between use and abuse. Risk factors are be identified and related to theoretical explanatory models. Conclusions focus on possible reasons for the limited success of current prevention programs and plausible alternative directions.

An extensive review of the recent literature on drug use among adolescents reveals a confusing, often contradictory picture. It is difficult to pinpoint any one feature, or group of variables as being more influential than any of the others when examining antecedents, correlates, and prevalence of adolescent substance use. As well, there is comparatively little known about the etiology of substance abuse. It seems to be generally accepted by researchers that drug use and abuse results from a complex interaction of genetic predisposition, behavioral patterns, personality, individual motives, and social, contextual determinants (Jessor, 1990, 1992). What has also been identified is a set of risk factors which tends to be associated with chronology, chronicity, and patterns of use. The incidence, patterns, and extent of drug use are issues that receive close attention from health care practitioners, teachers, parents, and social policy makers. Although recent epidemiological studies suggest that for most adolescents substance use is a transitory phenomenon (Weber, Graham, Hansen, Flay, & Anderson Johnson, 1989), there is a growing concern about adolescent alcohol consumption, drinking and driving, and experimentation with other illicit substances. In fact, some research suggests that approximately 10-30% of adolescents will develop problem drug use (Pagliaro & Pagliaro, 1993).

Much of the concern has been as a result of the increasing numbers of fatalities from drunk drivers, the increased rates of suicide attempts or completions by intoxicated or overdosed teenagers, and the propensity for some youth to develop chronic, addictive behaviours after experimentation with drugs such as alcohol (American Medical Association, 1994). Furthermore, it has also been documented that adolescent drug use is correlated with a higher incidence of other problem behaviours including: illegal activity, premarital sexual intercourse, pregnancy, and poor academic performance (Elster, Lamb, & Tavare, 1987). Recall from chapter two that Jessor and Jessor (1977) coined the term Problem Behaviour Syndrome in reference to adolescents who exhibit several of these characteristics in relation to, or following drug use. By adulthood, continued drug use and other problem behaviours may be comorbid with psychosocial and social disorders that develop from initiation of this syndrome in adolescence (Fisher & Lerner, 1994).

There are many long term medical, developmental, and sociological health implications associated with chronic drug use. For example, one third to one half of lung cancer and coronary heart disease cases in adults are attributable to adolescent drug abuse. Fetal Alcohol Syndrome elicits profound cognitive and developmental handicaps well past adolescence (American Medical Association, 1994). The risk of AIDS is increased as a result of the role that intravenous drug use plays in its transmission. Violent crimes, child abuse, decreased productivity and unemployment have also to be factored into the consequences (Hawkins, Catalano, & Miller, 1992).

Contributing to the difficulty inherent in the study of drug behaviour and risk factors are research design or empirical limitations. Specifically these include: lack of empirically derived causal models, prevalence of correlational statistical analysis, and lack of longitudinal, prospective studies needed to create adequate data bases for etiological analysis (Kumpfer, 1989). Generally, even the more comprehensive longitudinal studies have tended to track adolescents for, on average, three to four years and have relied heavily on self-administered, mailed or lengthy questionnaires (Shedler & Block, 1990).

Equally as problematic have been the inconsistencies in the operational definitions of drug constructs such as the delineation of use from abuse and physical dependence. Different drugs, different levels of drug use, different types of youth groups, developmental age, race, gender, and sociocontextual factors are not always clearly defined, which renders many studies' findings incomplete or at worst, inaccurate and misleading.

Challenging the more popular view that adolescent drug behaviour is detrimental to normal development, there is an interesting and refreshing body of research that recognizes drug experimentation as a typical, and perhaps essential component of healthy adolescent experience (Baumrind, 1985, 1987; Shedler & Block, 1990). Put into its proper perspective, Baumrind does distinguish among transitional risk-taking behaviours which are health endangering yet adaptive from more pathological expressions of maladjustment. From her research, she asserts that some experimentation with drugs seems to allow for the achievement of what she has labeled *secondary gains*. Higher self-confidence, increased stress tolerance, and practice in taking initiative are considered examples of the gains available to an adolescent who explores risky options. Moreover, she classifies it as an adolescent's "pursuit of opportunities for self-transcendent challenge (eustress), and pleasurable excess (eudaemonism)" (p.98).

In an effort to understand risk-taking behaviour within the context of a contemporary drug using North American youth culture and within the parameters of normal development, Baumrind and others view drug *use* as the norm rather than the exception. Although the claim is made that certain risk behaviors and their unfortunate outcomes such as heroin use and teenage pregnancy are clearly exceptions to one's growth enhancement, and serve to foreclose rather than expand options, early and late adolescent marijuana experimentation is seen to be correlated with social maturity and general psychological good health. Newcomb and Bentler (1988) add credence to the argument for normative behaviour with their comment:

> one defining feature of adolescence is a quest for the establishment of independence and autonomous identity and functioning. This may involve experimentation with a wide variety of behaviours, attitudes and activities before choosing a direction and way of life to call one's own. This process of testing attitudes and behaviour may include drug use. In fact, experimental use of various drugs, both licit and illicit, may be considered a normative behaviour among United States teenagers in terms of prevalence, and from a developmental task perspective (p. 214).

Additional support for the proposition that drug use may reflect age appropriate and developmentally reasonable experimentation is found in the following account. In one of the very few, prospective, longitudinal studies conducted examining the relationship between psychological characteristics and drug use, Shedler and Block (1990) followed over 100 nursery school children for a 13 year time span until they had reached age 18 years. To date they have been assessed thrice; initially when in nursery school, once during early adolescence (age 14) and again when they reached late adolescence (age 18). On the basis of personality assessments and drug information collected at age 18, subjects were grouped into frequent drug users, experimenters, or abstainers. Among the most significant findings was the uncovering of important psychological antecedents of drug use dating to the earliest years of childhood. In particular, alienation impulsivity, and anxiety were traits of frequent users; abstainers demonstrated characterological overcontrol of needs and impulses, general fearfulness, and avoidant behaviour. Also noteworthy was the finding that both frequent users and abstainers were judged to have had poor maternal parenting evidenced by criticism, pressuring and unresponsiveness. Far from being problematic, adolescents in this study who had experimented with drugs (use of marijuana once or twice, a few times or once a month) were determined to be, psychologically, the healthiest group.

The uniqueness of this study lies in its true longitudinal design, its extensive evaluation of participants by a panel of psychologists, and its approach to statistical analysis. To date, very few studies of this kind exist in the drug research literature. It is precisely this type of work that is sorely needed in order to do more than highlight correlational relationships of drug use by providing plausible etiological models specific to drug using populations.

Having outlined several contrasting positions and prevalent concerns regarding the issues of drug behaviour, the following section is a presentation and analysis of both Canadian and American demographic trends found in the substance use literature.

Epidemiological Trends

A recent survey by Health and Welfare Canada (1991) reports the incidence of alcohol use in Canada. Over 1,800 youth aged 15-24 years were sampled from across all regions of the country. A first glance at the statistics would suggest a promising view of the present use of alcohol and other illicit drugs. For example, it was reported that fewer young Canadians are drinking and those who are drinking are drinking less. Stated in percentages, there appears to be a decline of about 6% during the last four years, within the 15-19 year old group, and a 4% decline during the same time period for 20-24 year olds. It was also found that about eight in ten Canadians aged 15-24 are current drinkers; the most consumption is found within the 20-24 year age group. However, only 8% report never having consumed alcohol.

Other findings in this survey include a difference in prevalence between males and females. Male youth are more likely to be current drinkers and the differences in frequency and amount consumed increases with age. The only exception is seen in adolescents within the 15-16 year old category. In this age range, females are slightly more likely to report being current drinkers than males. Geographic patterns demonstrate proportionately higher use in British Columbia and the Prairie provinces, followed by Quebec. The lowest incidence was found in the Atlantic provinces. The most commonly cited reasons for drinking were to be sociable, to feel good, to relax, to enjoy meals, to feel less inhibited, and to forget worries. Interestingly, youth who report drinking to forget worries consume more drinks per week compared to those who report drinking for social reasons. Is it that these teens perceive more worries than other adolescents, or that worried adolescents have a natural proclivity to drink larger quantities? Perhaps, they have a genetic or acquired higher physiological tolerance to the drug's depressant, sensorial numbing, action.

It was also found in this survey that friends are the most frequent companions for youth who drink. Family members are cited as the next most frequent partners for drinking. An important finding is that adolescents rarely drink in solitude. The most likely situation in which young people reported drinking was at parties. However, they tend not to drink when others in a group are not drinking.

Further, it was reported that the drinking style of Canadian youth appears to differ from that of older individuals. For example, it was concluded that 15-24 year olds consume alcohol less often than older groups but are more likely to consume larger amounts on the occasions that they do drink. This finding is especially true for teens within the Atlantic provinces. Although this Eastern region reports a proportionately smaller incidence of alcohol use, those who do drink appear to be at greater risk for becoming heavy drinkers and experiencing the negative health and social consequences associated with intoxication.

Of critical note is the finding that, of those who considered themselves to be problem drinkers, very few sought help from professionals. It was more likely that a friend or a family member was solicited. This survey supports a decline in alcohol use. The developmental theories of risk might suggest that it is the presence of denial, the prevalence of cognitive immaturity, the notion of invincibility, and fear of peer retaliation that contribute to the lower rates of reported consumption by this nation's youth. Furthermore, it is possible that adults, parents and teachers are reluctant to admit or to report a child's use or misuse of drugs.

In addition to alcohol, the survey examined trends in illicit substance use across the country. It would seem that although illicit drug use is reported to be generally low, there is a growing incidence of multiple drug use, which, if examined closely, may be influencing the figures reported for alcohol and single drug use. Multiple, or polydrug use, is defined as the current use of two or more of the following substances: alcohol, tobacco, marijuana, cocaine, LSD, heroin, sedative-hypnotics, and prescription opiates. Overall, it was reported that more than one third of Canadians between the ages of 15 to 24 are multiple drug users. Only 15% do not use any of the above substances. Again, British Columbia reported the highest rates followed by Quebec, and the Prairie provinces. As with alcohol, multiple drug use increases with age. The pattern of drug use varies with age, yet alcohol remains the substance of choice among 15-24 year olds. It is also likely that the use of alcohol and tobacco increases the probability of experimentation with other drugs, notably marijuana and cocaine. This finding lends some support for the Gateway or Stepping Stone Theory of alcohol use (Welte &

Barnes, 1985). For example, use and abuse of other drugs may follow experimentation with recreational alcohol use.

In a closing statement, the authors of the Health and Welfare Survey (1991) acknowledge the growing problem especially in the more high risk adolescent groups, namely school drop-outs, and street youth. Although drug *abuse* is prevalent in the high risk groups, that in itself does not reduce the incidence of experimentation and/ or injury within the majority, non-troubled adolescent population.

Presently, we do not really know the causal relationship between drug use and other unconventional behaviour. The limitation of this knowledge base is in part reflective of the nature of the research methodology and in part a result of the particular theoretical model under investigation, as was discussed earlier. What we have learned is that many adolescents, conventional and unconventional, high risk and low risk, try alcohol and other drugs. Furthermore, many who do experiment with licit and illicit substances participate in other risk behaviours. What we don't know for certain is why some youth don't take such risks, why some only risk for a brief time and why others become part of a subgroup of chronic risk-takers.

Some research exists which counters the conclusions made by the Health and Welfare (1991) survey and others (Bibby & Posterski, 1992). It suggests an alarming rise in the use of drugs among North American youth. For example, Pagliaro and Pagliaro (1993) maintain that the use of abusable psychotropics among youth is increasingly significant, and as such, is beginning at younger and younger ages. Further, they claim that "alcohol continues to be responsible for more physiologic, psychologic, and sociologic harm than is caused by all of the other abusable psychotropics combined" (p.681). As well these researchers believe that drug use is most certainly on the incline within the United States and Canada. Semiltz and Gold (1986) and MacDonald (1987) report that cocaine abuse is increasing faster than any other drug, while marijuana use is on the decline and alcohol use remains high but stabilized. These findings were evident in non-clinical junior and high school adolescents between the ages of 14-18 years.

In contrast to the higher rates espoused by some investigators, Bibby and Posterski (1992) report a general decrease in drug use. However, they rely heavily on the Health and Welfare survey (1991) and the Ontario Student Drug Use Survey (1989) for statistical information. To cite Ontario statistics as being representative of the rest of Canada ignores British Columbia and the Prairies, two regions with the highest incidence of alcohol and other drug consumption in youth. To their credit they mention that a substance abuse problem prevails in several different pockets of the country. For example, they cite a comment made by a rural high school student:

> Substance abuse is a huge problem in my high school. I'd say that about 65% of the people in grades 10, 11, and 12 have tried drugs and about 15% are steady users. There isn't enough for teenagers to do, so most of them do drugs or drink. Many of my friends drink every weekend. (p. 25).

What are the findings comparing substance use in rural and urban centres? One major U.S. study provides data that suggests that urban and rural use is fairly similar (Committee on Appropriations, House of Representatives, 1992). This study found that the percentage of rural students using alcohol, cannabis, or tobacco in a 30 day period before being surveyed was 54.4% for alcohol, 12.6% for marijuana, and 30% for tobacco. These rates were similar to those cited by urban and suburban high school seniors. A study comparing rural and urban trends in alcohol consumption in Nova Scotia demonstrated an alarmingly high number of teens within both districts, to be experiencing alcohol related problems. (Mitic, 1989).

What about patterns and prevalence in other industrialized nations? Do their youth demonstrate trends of particular concern? A cohort study was done in France using over 300 adolescents between the ages of 16 and 18, to investigate the prevalence, incidence, and remission rates of self-reported alcohol use (Choquet, Menke & Leduc, 1989). Their findings are similar to those reported by Canadian and American researchers. For example, alcohol use was found to increase with age, notably among boys. Intentional, repeated drunkenness is a relatively new phenomenon and is becoming a more prevalent trend. Accompanying a decline in alcohol use is a corresponding increase in illicit drug use. It seems that, at least in France, there is a growing concern for patterns of substance use which are resembling those in other Anglo-Saxon countries.

From an examination of recent literature on trends in drug use within the United States, there is an equally muddied picture. Recent survey results from the American Medical Association (1990) focusing on adolescent health acknowledges that large numbers of adolescents report "have[ing] tried or currently use tobacco, alcohol, and other drugs" (p. 22). Alcohol and cigarettes continue to be the drug of choice for the majority of adolescents. Drawing from a national household survey on drug abuse (1988), the A.M.A. does recognize the limitations of this survey data, including an underestimate of the extent of drug behaviour within at least late adolescent populations. They claim that, a more accurate picture of substance use might be have been possible if the entire age group sampled (12 to 17 year olds) had been replaced with a sample of 15 year olds who are known to be more representative of drug experimentation. Further, this data is also criticized for its systematic undersampling of black and Hispanic youth. Also missing from this source was some indication of past trends in relation to on going drug behaviour. It is difficult to ascertain relative, secular patterns and incidence without comparison data.

Other American sources cite statistics which further confuse the reader. For example, in a review of current theory and research on adolescent drug abuse prevention, based on 1990-1991 drug use surveys, Pentz (1994) reports that the one to three percent decline in drug use in the U. S. primarily occurred within the adult not the adolescent population. Moreover, the use of licit drugs such as alcohol and tobacco "have not decreased substantially for adolescents" (p.437).

In short, an examination of national and international demographics demonstrates, quite clearly ,the lack of consensus among research findings. Perhaps a close look at the generally accepted and frequently reported risk factors might help to clarify the picture and to serve as a foundation upon which to generate more effective prevention strategies.

Drug Use and Abuse Defined

Before risk factors are detailed, it is necessary to distinguish between drug *use* and *abuse* and to advance a reasonable definition of each. Critical to a basic understanding of its complex nature is the fact that drug use and abuse are not independent phenomena; rather they represent two dichotomous positions on a continuum (Glantz & Pickens, 1992) regardless of whether the drug is alcohol, marijuana or cocaine. Yet as will be shown, the etiology of abuse does not appear to be the same as for the etiology of use. In other words, the variables that determine risk for use do not themselves necessarily predict the transition from use to abuse. Moreover, from an examination of many empirical studies, there is no clear demarcation point at which use obviously becomes abuse.

A simple, straightforward conception of the term abuse acknowledges a frequent use of alcohol or other substances during adolescence, in a manner that is associated with problems and dysfunctions. These problems can be social, interpersonal, motivational, emotional, academic, and physical. A set of criteria proposed by the World Health Organization (1990) and found in Babor (1992) that details evidence of a form of abuse or dependence includes the following:

> (1) A strong (sometimes overpowering) desire to take alcohol or drugs. This is seen shortly after a session of drug taking had begun (when the initial dose can be said to have had a "priming effect") or during attempts to stop or control substance use; (2) Evidence of an impaired capacity to control the onset of substance use, its level or termination; (3) A progressively stereotyped pattern of substance use, in terms of the type of drug (or alcohol) taken, the mode of administration and the quantity over a given period of time. Substance use becomes less responsive to external influences and more to internal ones (e.g., mood states or presence of physical withdrawal syndrome); (4) Progressive neglect of alternative pleasures or interests in favor of substance use, or failure to fulfill major role obligations; (5) Evidence of tolerance such that increased doses of the substance are required to achieve effects originally produced by lower doses; (6) A physical withdrawal state; (7) Use of a substance to relieve or avoid withdrawal symptoms, and with awareness that this strategy is effective; (8) Persistence with substance use despite clear evidence of overtly harmful consequences. Adverse consequences may be physical,(medical), psychological, or social (p.73).

The above definitions also reflect a recognition that not all teenagers who try these substances become involved in frequent use or develop drug-related problems. The pattern of progressive use relies on more compulsive, harmful stages. Five well-defined progressions are: 1) initial use; 2) social use; 3) habitual use; 4) abuse; 5) compulsive use (Pagliaro & Pagliaro, 1993). A common clinical observation of this progression reveals that it is highly individualized and is clearly a non-linear process (Tarter & Mezzichi, 1992). Thus, determining whether a teenager is merely experimenting (using) or more seriously abusing a particular or variety of substances, becomes more complex than the distinction between "use" and "non use". For example, one must assess the initiation of use, (temporal) the repetition and frequency of repetition, its cessation or continuance, and subsequent level of use. Further, a consideration has to be given to the abuse liability of the drug or drugs used. This involves knowledge of differing pharmacologic and psychoactive effects. Taken together, the process of distinguishing experimentation from other levels of transition including abuse is a difficult task. Added to the confusion, are the poor practices of researchers who fail to delineate the differences when reporting substance behaviour findings. However, guided by theoretical explicatives and the identification of risk as well as protective factors, some of the issues surrounding adolescent drug behaviour can be clarified.

Theoretical Views Of Risk Factors

A risk factor is a precursor of drug and alcohol problems and tends to be associated statistically with an increased probability of drug dependence (Hawkins, Catalano, & Miller, 1992). As such, a risk factor may include an individual attribute, individual characteristic, situational condition, or environmental context that increases the probability of initiation or transition to abuse. Conversely, a protective factor is an individual attribute, characteristic, situational condition or environmental context that may reduce or minimize the probability of drug use.

In general, as an overall guideline, drug use appears to be more a function of social and peer factors whereas abuse seems to be more a function of biological and psychological processes (Glantz & Pickens, 1992). For example, risk factors for use include friends who use drugs, peer influences on use, unconventionality, low involvement with traditional value-oriented institutions, poor academic achievement, poor relationships with family and parental dysfunction. In relation to the theories resented in chapter two, social learning theory might offer some explanation for drug use.

Risk factors for abuse seems slightly more complex, in that although drug use cannot be said to cause drug abuse, use of substances and the nature of that use does strongly contribute to abuse. Furthermore, unlike use, the greater number of drug-abusing risk factors heightens the risk for abuse. Particularly, early age of onset and high frequency of use correlates highly with subsequent abuse. A family history of substance abuse, individual psychopathology including antisocial behaviour and aggressive behaviour also influence the likelihood of drug abuse. In addition to the recognition of the above mentioned risk factors, a final point needs to be restated regarding drug use transitions. While many adolescents will and do experiment with legal substances such as alcohol and illicit substances such as marijuana, only some users will make the transition to abuse. The influential factors leading to abuse, unfortunately, are not determined by any one particular explanatory model, such as the Gateway Theory or etiological pattern (Glantz & Pickens, 1992). Such multidimensions as the pharmacological properties of the drug or combinations of drugs, genetic features, developmental level, age of onset, personality, and social context as well as the presence of protective factors also play separately and conjointly into the abuse etiology equation (Newcomb, 1992).

Current drug researchers, far from completing a comprehensive profile of a likely substance user or abuser, have at least suggested descriptors common to both. These include poor academic achievement and low academic aspirations, many deviant behaviours, little respect for the law, little belief in religion, high emotional distress, poor parent and family relations, perceived encouragement for and actual drug use among friends, easy access to drugs, and low likelihood of punishment for using drugs. On the other end of the continuum, researchers have determined several characteristics common to those less likely to use drugs. As would be expected, they include high academic performance and interest, avoidance of delinquency and adherence to laws, strong religious beliefs, emotional well-being, good relations with family, few models of drug use, and fear of being caught and punished for using drugs (Newcomb, 1992).

Developmental Models

Drug Behaviour in the Context of Other Adolescent Behaviour

Interestingly, many of the risk factors for adolescent drug behaviour also coexist with other adolescent problem or risk-taking behaviour. As was earlier mentioned, there is evidence that adolescent drug abuse is highly correlated with delinquency, drinking and driving, teenage pregnancy, and school drop-out (Jessor & Jessor, 1977; Arnett, 1992). Collectively, these behaviours have been labeled as reckless (Arnett, 1992) self-destructive (Kelly & Dawson, 1986) or problem behaviours (Jessor & Jessor, 1977).

The Jessors' Problem Behaviour Theory (1977) conceptualizes substance use within a general context of problem behaviour proneness. Experimenting with drugs; early, unprotected, frequent sexual intercourse; and stealing are examples of an overall pattern of deviant, unconventional behaviour. Included in this construct is the recognition of an underlying social psychological, developmental framework. Simply put, this model attempts to account for the relevance of a problem behaviour (e.g., drug use) as serving a regulatory, developmental, function. Engaging in these behaviours is a way of marking a developmental transition between childhood and adulthood. This theory should be recognized for its effort to normalize unconventional or risk behaviour yet it does not readily account for the fact that not all teens will actively behave in these compromising ways.

Transactional Ecological Model

Another developmental theory posited by Sameroff (1988) considers a Transactional Ecological Model as a framework within which to integrate existing information about disparate risk factors. Similar to Jessor's (1992) proposition that variables from separate domains interact to influence risk-taking, this pluralistic theory accounts for risk-taking by suggesting that an interactive, synergistic relationship occurs between the adolescent and his/her environment (peer, family, school). For example, a teenager's type and level of behaviour, is in part, mediated by environmental response which in turn, is mediated by the teenager's response to the environment. Both history and immediacy are accounted for in this framework. Sameroff (1988) identifies two central constructs relevant to this discussion. One of them is referred to as *the continuum of reproductive causality*. To paraphrase, the notion of biological predisposition determines to some degree, the evolution of adolescent drug behaviour. Although there is thought to be a learning component to alcoholism and other addictive behaviours they do show strong genetic and familial tendencies. In fact there is great excitement in biogenetic research regarding the possibility of an alcogene, responsible for alcoholism (Blum, 1991). However, heritability alone does not account for the its expression.

In conjunction with the notion of *reproductive causality* is a *continuum of caretaking causality*. This dimension necessarily involves parents and experiences in the family as key factors in the risk for early substance involvement. However, as with an alcogene theory, parents and family alone do not determine an adolescent's behaviour. To give this theory more credence, *caretaking causality* also includes the influence of peers and those external experiences which occur outside of the home environment.

As a suitable heuristic for explaining drug use in teens, Sameroff's Transactional Ecological Model (1988) appeals to those who favour an interactionist model. It goes further to acknowledge the transactional operation of a complex set of cultural, societal influences (the macro level) which both regulate and interact with the individual (the micro level) and the family or peer group (the mini level). Far from simplifying a theoretical basis of understanding, this model is a highly complex representation of a multifaceted appr[illegible]iology and prevention.

The Mega Interactive Model

A similar model has been put forth by Pagliaro and Pagliaro (1993). The Mega Interactive Model Of Abusable Psychotropic Use Among Youth (MIMAPY), consists of four interacting variable dimensions: 1) Youth Dimension; 2) Societal Dimension; 3) Time Dimension; and 4) Abusable Psychotropic Dimension. In essence, this model considers the multidimensionality of drug use. In particular, these authors recognize the attraction that certain drugs hold for youth. Further, they acknowledge the heterogeneity among adolescents, which requires individualized and diverse preventative measures. As such, this model can also serve as a backdrop for assessment and treatment. In examining the Transactional Ecological Model and the MIMAPY, the intricacies, of the adolescent, of the environment and of the drug itself, seem to collectively influence a teenager's course of action. Perhaps, the multimodal approach, in consideration of all known variables, has the greatest likelihood of understanding the predictors of drug use and directing therapeutic interventions.

Psychosocial Factors

Social learning theory (Bandura, 1977) has been proposed as a viable conceptual framework for understanding the etiology of adolescent drinking behaviour. In other words, modeling and reinforcement are seen as highly influential in the promotion of substance use. To explain the behaviour of those who chose not to participate, social learning theorists recognize the value of self-regulation and self control.

Within this paradigm, one must naturally consider the behaviour and attitudes of family members. The exact nature of how the family positively directs or modifies behaviour of their offspring is not readily apparent in this theory. However, poor parenting practices, high levels of conflict in the family, and a low degree of bonding between children and parents appear to increase the risk for adolescent problem behaviour generally, including the abuse of drugs and alcohol (Hawkins, Catalano, & Miller, 1992).

The role of siblings in the course of drug use and drug patterns is an interesting one. Brook, Whiteman, Gordon, and Brook (1988) found that an older brothers' advocacy of drugs and modeling of drug use were both associated with younger brothers' use. Further, older brothers' and peers' drug use were more strongly associated with younger brothers' use than was parental modeling.

Parenting style has been found to influence substance use. Permissive parental attitudes, including tolerance and approval, have been reported as being even more central in determining use than their modeling behaviour (McDermott, 1984). Current literature suggests a separate influence of family interactions to adolescent drug use, from the effects of parental use. What this means is that parental drug use in a rewarding, prosocial, family structure only slightly promoted frequent drug use (marijuana); in an unrewarding context (criticism, blaming, lack of praise) there was a clear association between levels of drug use by parents and their children (Tec, 1974). In the overall context, this research suggests that modeling of alcohol and other drug use occurs in many family settings, well before the onset of the teen years and well before the influence of peers.

Peer influence provides a rather mixed picture. A body of research has demonstrated that an association with drug using peers is among the strongest predictors of substance use in adolescence. Peer influences promote the initial use of all drugs, especially marijuana (Semlitz & Gold, 1986). However, given that adolescents are more likely to act in accordance with group norms, it would seem just as likely that any lack of support for drinking could easily be promoted within the entire group. In other words, peers may be viewed by many in a negative light. However, peer pressure can be made to work in the best interests of its members.

Personality Correlates Of Drug Use

At first glance, what appears less complex in the understanding of teenage drug use is the recognition of several readily identifiable individual, personality risk factors that do not necessarily fit into any one theoretical paradigm. In isolation, each provides a degree of explanatory power when considering initiation, promotion, and maintenance of drug use. However, it is most difficult to determine which of these, alone or in concert, are most virulent, which are modifiable, and which are specific to drug use.

In terms of individual characteristics, Jessor and Jessor, (1976) define the transition prone adolescent (described earlier under *Problem Behaviour Theory* of drug use) as scoring high on independence, social criticism, and alienation but low on achievement, religiosity, and negative feelings about drug use. In contrast, adolescents who hold more traditional values, would necessarily be part of the abstainer group. This sounds believable enough but overall the findings are inconsistent among studies.

Sensation-seeking, as described by Zuckerman, (1979) has been identified as a correlate of substance use. It is a trait characterized by a tendency to seek out intense, varied, and novel activities and is assumed to have a biological and biochemical basis in monoamine oxidase. This would mean that rather than emotions, cognitions and social influences, neurotransmitters might play a more central role in sensation-seeking. The general construct is described as having four dimensions; (1) experience seeking; (2) thrill or adventure seeking; (3) disinhibition; (4) boredom susceptibility. This multidimensional construct is what Arnett (1992) believes to be one of the driving forces behind most risk-taking behaviour in adolescence. In fact he claims that adolescents as a group are especially high sensation seekers, reaching a peak at 16 years. Accordingly, risk taking (drug use) is influenced by the interaction of sensation-seeking and perception of anxiety. The combination of high sensation-seeking and low anxiety might facilitate the use of psychoactive substances to alter state of consciousness. Conceptually, it is an interesting idea; however the empirical relationship among the separate dimensions of sensation-seeking and drug initiation and between sensation seeking and other levels of transition remain unclear (Clayton, 1992). For example, whether adolescents are trying to heighten an already pleasant mood or to simply experience exciting activities has not been adequately determined.

Alienation, aggressiveness, and rebelliousness, as well as a high tolerance for deviance and a strong need for independence have all been linked to drug use. Favourable attitudes towards experimentation or poor knowledge about its harmfulness appear to characterize those who try and those who having tried, continue to use psychotropics.

Academic correlates of substance use include low scholastic performance and motivation, often corresponding to failure and or school drop-out. Factors such as how much time students spend on homework, how much they like school and how they contemplate future aspirations are related to levels of drug use (Hawkins, Catalano, & Miller, 1992).

Societal Influences: The Role of The Media and Family

It appears then that a host of individual and social variables factor into adolescent substance use. It becomes even more complex when an attempt is made to distinguish experimentation from abuse or dependence. Within a pluralistic, interactionist framework, and drawing from the Mega Interactive Model coined by Pagliaro and Pagliaro (1993) the nature and extent of the problem can be more sufficiently explained by looking at the global role of the community; societal laws, norms and expectations for its younger generation. As one researcher cogently writes "the social and cultural contexts within which people live exert a strong influence on their opportunities to use drugs and on the normative pressures and values to continue or progress" (Clayton, 1992, p.46).

Are we a society that promotes drug use? I would argue that commercial exploitation by the media succeeds in promoting the use of both licit and illicit drugs. Television, clearly plays a role in alcohol awareness. Constant exposure to beer commercials as a means to relax and have fun, may gradually become accepted as part of one's values. The younger and less experienced are often the most affected, as they spend large amounts of time watching television and are, for arguments sake, less able to parse out reality from fantasy.

Pharmaceutical companies spend plenty sending signals to encourage drug use: Take a pain killer for a headache, take a diet pill to decrease appetite, take a vitamin to boost low energy. To those aware of the intent, these messages, are recognized as nothing short of manipulation. However, to an adolescent these are often desirable, pseudo-adult goals that appear within reach. In short, repeated exposure to direct and subliminal advertising reinforces a positive association between at least licit drug use and wealth, good times, and independence.

The availability of sanctioned and illicit drugs is dependent upon the norms and laws of society. Laws regulating how alcohol is sold will dictate to whom it is sold. For example, the recent movement to privatize liquor stores in Alberta, might soon allow for the purchase of alcohol in local grocery stores. This might promote more accessibility to youth. The temptation to use could be far greater when it is located next to the chocolate bars. Further, as government generates considerable taxation revenue from the selling of alcohol, it is difficult to lobby, successfully, for less advertising.

Elkind's (1984) idea of the disappearance of childhood, including adolescence, from the life cycle, fits well with the notion of endangered youth. He believes that this recent denial of adolescence as a special stage contributes to insufficient maturity. He writes:

> ...by bestowing a premature mantle of adulthood upon teenagers, we as parents and adults impair the formation of their sense of identity and render them more vulnerable to stress. We thus endanger their future and society's as well (p.15).

I propose that the desire to reach adulthood, perhaps fostered by the lengthy time spent in the moratorium of youth, coupled with media influence promoting a positive association between adulthood and licit drug use, and the existence of ineffective parental role models, can help to explain adolescent drug use. For example, sophisticated, adult-like behaviour is being promoted at earlier and earlier ages. Children's fashion encourages visual images of adult beauty and sexual maturity. These visual images, however are incongruent with the developmental age of a child. An adolescent who has been dressing in this fashion for several years, or who is competing with young children who wear age-inappropriate clothing, may look the part of an adult but is not psychologically or physiologically mature enough for the role. This is both confusing for the adolescent (who is already in the throes of massive change) and the adults who interact with him or her.

As members of a North American culture, we are all being exposed to, and trying to cope with, the advent of rapid social change. Parents are not immune to confusion or self-doubt. Many are re-evaluating their own values and principles. Yankelovitch (1981) refers to this societal philosophy as a search for self- fulfillment. Thus, adult self-absorption, coupled with teenage egocentrism can be an explosive combination. Teenagers who on the one hand are testing their independence and on the other hand are requiring guidance and direction, are a confusing group for their elders. If a significant parental role model is preoccupied or unavailable, the result may be an adolescent who is autonomous and well removed from the family unit. Elkind (1984) suggests that this situation lends itself to the development of teenagers as *unplaced youth* whose weak, patchwork sense of identity, inhibits healthy development.

It seems that teenagers are among the many groups who are not being sufficiently prepared to handle society's demands for adjustment and change. If an adolescent has been unable to develop a sense of integration, it is conceivable that he/she may mismanage his/her emotional, social, and physical development. It is also conceivable that the relative sense of freedom from parental monitoring and the temptation to assume pseudo-adult roles, might be among the necessary ingredients for drug experimentation. What is often neglected as a correlate of drug experimentation is adolescent ignorance of the physiological effects of the particular drug consumed. Coupled with that is the limited awareness of how sociocontextual factors modulate the effects of drugs. For instance, a teenager who drinks alcohol at a friend's party may initially become more sociable, drink more, and disregard or become unaware of the adverse effects of excessive consumption. As a result, it is possible that he or she may become acutely ill from the experience. Thus, lack of tolerance to alcohol, peer pressure to drink and the initial disinhibitory effects of the drug should be figured into the explanation of adolescent drug behaviour.

In sum, risk factors seem to originate from and overlap with several domains. Some are characteristic of the individual; others are characteristic of families and their interactions, genetic influence, schools, peers, and the larger community.

Towards Comprehensive Health and Drug Prevention

If, as has been suggested in much of the current literature that drug use and abuse is a real concern for teenagers, what direction should be taken to lessen the risks and improve the efficacy of prevention programs? To date efforts to curb use and to promote abstinence have been largely unsuccessful (Botvin & Botvin, 1992). This is, in part, a result of several mediating influences. First, distinctions between the terms *drug use* and *abuse* have not been consistently maintained. Remember that most youth do not habitually use illicit drugs and that experimenting users do not necessarily accelerate their use to become substance abusers. Until recently, the tendency to collectively refer to any use as abuse has undermined efforts to uncover the differing etiological pathways and mediating factors specific to each, and has made difficult efforts to establish effective prevention programs. Second, many risk factors are not easily manipulated. For example, a family history of alcoholism may continue from one generation to the next and not be amenable to treatment. Third, societal and media influences that collectively promote alcohol, tobacco and drug use, are very resistant to change. Fourth, common approaches have been to present factual or emotionally laden information concerning the dangers of substance use. Fifth, little is known about protective factors, which contrary to risk factors, help to modify risk. Sixth, and perhaps the most important, it is possible that teens participate in drug experimentation as a part of a healthy coping strategy. As a result of these considerations, adolescent substance use behaviour, historically, has not been accurately targeted by many current prevention programs.

More recent and promising prevention strategies appear to have become broader in scope focusing on general health promotion. Within the United States encouraging results of some research in the area of prevention show 20 % or higher net reductions in rates of drug use onset that practice active social learning methods, include standardized teacher training, and involve student peer leaders (Pentz, 1994). Particularly, in organizing educational, social and environmental resources to delay the onset of alcohol, cigarette and marijuana use, to reduce the risk of disease and to enhance wellness, an emphasis is placed on a multiple-risk over drug specific prevention programs. For example, current innovative strategies are beginning to utilize underpinnings borrowed from Problem Behaviour Theory and social learning theories (Petosa, 1990; Pentz, 1994). A central premise is that adolescents who have fewer effective coping strategies, fewer skills in handling social situations and less access to socially approved opportunities are more vulnerable to a constellation of problem behaviours. The goal is to provide adolescents with options, other than health compromising behaviours, in their efforts to make competent, informed decisions. As well, drawing from Social Learning Theory (Bandura, 1977) preventive measures provide adolescents with models that do not rely on drugs to achieve their desired status, as well as definable, realistic, alternative goals which are incompatible with drug use.

Rather than simply disseminating factual information, these comprehensive, multi-theory based programs are now beginning to focus on the social contextual influences that promote substance use, including the community level, and are designed to enhance personal and social competence by teaching life coping skills appropriate to developmental age (Perry, Klepp, & Shultz, 1988; Tobler, 1989).

Recognition that family and peer influences constitute a major role in initiation of substance use directs additional efforts to these groups. The involvement of peers, for example, can be dealt with through their participation as prevention or teaching agents. It also seems reasonable that parents who are involved in the learning process with their children might, together, promote family well being and facilitate more global, far reaching social and political change (Berg, Golec, Hancock, Sarawsati, & Thomson, 1993).

Skills in resisting social influence involves making adolescents aware of the subtle messages implicit in advertising. Methods of program delivery might include the involvement of students in a combination of role play, modeling, and peer leader instruction. In addition, although initiation of drug experimentation occurs in early adolescence, classroom-based skills should be regularly directed to young children if they are to be well established by the onset of adolescence. Perhaps, even more comprehensive, might be the effort to promote, more general problem-solving techniques and decision-making skills, which could be transferred to many situations. For a comprehensive review of such peer programs, the reader is referred to Carr (1986) and Carr, Yanishewski, and deRosenroll (1989).

Normative changes may be more difficult to accomplish, especially if one accepts one of the core arguments of this chapter; that experimentation with drugs is likely a relatively healthy expression of normal adolescent development. However, in the form of advertisements, it is possible and reasonable to depict drug use as socially unacceptable among peers. It is also feasible to encourage individuals to make public, their commitment to abstain.

In conclusion, drug use, its etiology, and progressive course, involves a complex interaction of a number of psychosocial, developmental, and genetic factors. Among the challenges is to recognize the impact of all of these variables and to determine which among them, hold the most salience for each adolescent and to remember that not all drug use results in drug dependence and abuse. It may be most critical to keep in mind that smoking cigarettes, drug, and alcohol experimentation, if not yet the norm, is certainly becoming more commonplace among today's youth. As such, this risk behaviour may, for some, be a manifestation of healthy self-exploration.

A final cautionary comment is left for the reader to ponder. Adolescents face many challenges as they prepare for adulthood. If as a group they are to become successful, participating members of a culture, we, as a collective agent of change, must do whatever necessary to ensure their safe passage through puberty. It appears that unless society as a whole is willing to *risk* critical examination of its attitudes and beliefs, and to revamp public policy, the deleterious problems associated with drug use will continue to adversely affect all of its members from generation to generation. Yet it seems a fine line our society must walk in order to be able to tolerate youthful exploration, defiance, and experimentation, while being able and willing to recognize when their risk-taking behaviours endanger physical and mental health.

CHAPTER 4

Trends in Adolescent Sexual Risk Behaviours: Contraceptive Practices and Pregnancy

The focus of this chapter is not on adolescent sexuality per se, but on the consequences of its behavioural expression. For example, there are primary health risks associated with teenage sexual intercourse including increased risk of cancer of the cervix; sterility resulting from vaginal infections (Herold, 1984); sexually transmitted diseases (STDs) such as HIV infection; and social, emotional, and economic effects of pregnancy (Millstein & Litt, 1990). Further, early sexual initiation has been found to be associated with other health risk behaviours, notably alcohol and drug use, smoking, delinquency, and poor school performance (Jessor & Jessor, 1977; Donovan & Jessor, 1985; Yamaguchi & Kandel, 1987). For these reasons, medical researchers and mental health practitioners often view early sexual debut and coitus without consistent, effective contraception as risk-taking behaviours.

In approaching some understanding of trends in adolescent sexual attitudes and behaviour, this chapter is divided into four sections: the onset and incidence of sexual activity in males and females, the antecedents of contraceptive behaviour, the outcomes of sexual intercourse, and the covariation of other related risk behaviours. As there are some distinctions between Canadian and American epidemiological statistics, I review both countries' key research findings and offer some account for the alleged differences. The purpose of doing so is to make clear the nature and extent of the Canadian situation. Much of the adolescent research material is of American origin. In order to formulate ideas and programs suited to Canadian youth, we must be aware of our own national trends.

Similar to the findings detailed in chapter three regarding adolescent drug and alcohol use, I cite evidence to demonstrate that adolescent sexual behaviour involves a highly complex set of behaviours; a result of an interaction of demographic, biological, psychological, and social variables (Irwin & Shafer, 1991). Moreover, I consider the relevance of social learning theory and the role of cognitive processes in explaining adolescent sexual decision-making. Finally, in light of the view that adolescent premarital sexual intercourse is likely gaining recognition as a normative developmental behaviour, (Dryfoos, 1990; Chase-Lansdale & Brooks-Gunn, 1994) I consider some of the clinical and social implications that must be addressed. Notably, I argue for the possibility that sexual-risk taking could reflect a process of healthy identity exploration and may provide teenagers who choose to participate in these behaviours with positive psychosocial and psychosexual outcomes.

Incidence of Adolescent Sexual Activity in North America

Significant changes have occurred in adolescent sexual behaviour across North America during the last two decades (Herold, 1984; Irwin & Shafer, 1991; Fisher & Lerner, 1994). Since the 1970's when national survey data began being collected, there has been evidence of a steady increase in reported rates of teenage sexual activity coupled with a steady decrease in initial age of sexual intercourse. Within both Canada and the United States changes have been most notable among females. For example, within the United States it was estimated that, in the 1940's, fewer than 10 % of white females had sex by age 16 (Brooks-Gunn & Paikoff, 1992).

American Trends

American data provided by the National Survey of Family Growth demonstrated that in 1971, 33 % of females between the ages of 15 to 19 reported that they had experienced sexual intercourse. By 1988, for the same gender and age cohort, that figure had risen to almost 50 % (Landsdale & Brooks Gunn, 1994). Notably, over 25

% of females sampled by this survey reported experiencing initial intercourse by age 15.

Adolescent male sexual behaviour survey data has not been made readily available until the 1980's. Prior to that, between the years of 1940 to 1960, estimates of selected samples of teenage males suggested that one third to two thirds were sexually active. More recently, the 1988 National Survey of Adolescent Males (NSAM) highlights that between the ages of 15 to 19 years, 60 % of American males have engaged in intercourse (Irwin & Shafer, 1991). When the data is categorized into age cohorts, roughly 25 % of males aged 15 have experienced intercourse. By age 16 this figure has risen to 50 % (Irwin & Shafer, 1991). In sum, based on these statistics, it appears that by age 15 at least 25 % of both males and females become sexually active and by the age of high school graduation close to 50 % have engaged in sexual intercourse at least once. It is also currently reported that 75 % of Caucasian females and 80 % of Caucasian males have experienced intercourse by the they are 20 years old (Moore, Nord, & Peterson, 1989; Sonenstein, Pleck, & Ku, 1989).

What about the sexual behaviour of early adolescents? As reported by Irwin and Shafer (1991), two recent studies in the United States have attempted to uncover the incidence of sexual intercourse in age groups younger than 15 years. In the first study, it was found that, in a group of 10 to 14 year old Californian students, 21 % of adolescents had reported having had sexual intercourse. Also of interest were the following, typical findings: that significantly more boys than girls reported a sexual encounter; higher rates of intercourse were reported for black youths; and reports of sexual activity increased with grade level. In the second study in which 1,900 students were sampled within a community in the Midwest region, 30 % of the grades seven to nine sample reported being sexually active. Over 40 % of the males, as compared to 26 % of the females reported having sexual intercourse at least once.

One of the more important reasons for knowing the prevalence of sexual activity by age and gender is directly related to planning education, prevention, and intervention programs. For example, the earlier a young woman initiates sexual intercourse, the more likely she will have a greater frequency of intercourse, a greater number of sexual partners, and experience a higher risk of unintended pregnancy (Elster & Kuznets, 1994; Herold, 1984). Generally, because young adolescents do not regularly engage in formal operational thought, they do not often use any form of contraception or delay initiation of contraception. Thus, they are at a high risk for premarital pregnancy. Moreover, for those younger adolescents who do become pregnant, there is even greater incidence of maternal and or infant morbidity and mortality (Irwin & Shafer, 1991).

Canadian Trends

Canadian statistics reveal similar trends in sexual behavior. Beginning in the 1970's, Canadian researchers have surveyed predominantly high school and university students to investigate the incidence of adolescent sexual behaviour. In Saskatchewan, a survey of 15 to 19 year olds was conducted in 1979 and 1980. The Saskatchewan Ministry of Health reported that 35 % of the 15 to 17 year olds and 61 % of the 18 and 19 year olds indicated that they had experienced sexual intercourse (Weston, 1980).

Herold (1984) comments on the results from a selection of surveys conducted during the 1970's and early 1980's remarking that a significant proportion of older adolescents were experiencing sexual intercourse. He further notes that most young teens were not engaging in sexual relations during that time frame. However, in a survey of Calgary school youth, the same author found that 24 % of 14 year olds and two thirds of 18 year olds were experiencing intercourse (Herold, 1980).

Most recently, collating data from both a large scale national survey of high school youth across the country, and from a youth survey completed in 1988, Bibby and Poterski (1992) conclude that "young people of today give every indication that of engaging in sex on a level probably never before matched in Canadian history" (p.38). Specifically, they found that 55 % of 15 to 19 year olds are sexually active; 62 % of males and 49 % of females indicate sexual activity. These authors also report that variations among the regions are minimal; in the Atlantic provinces 62 % are sexually active, 57 % are sexually active in Quebec and Ontario and 50 % are sexually active in the West.

Similar to the previous national survey findings, it was found that in a rural Alberta community 55% of the students surveyed reported to be sexually active by the end of high school (Fehleauer 1992). However, contrary to the results for young adolescents reported by Herold (1984), Fehleauer documented that within the same rural population, those who reported being sexually active before graduation 43% were active by the age of 13 and 93% of them were active by the age of 16. It would appear then that presently sexual behaviour is occuring much earlier in Canada than was reported even a decade ago.

The American and Canadian figures demonstrate that the incidence of sexual intercourse among both nations is not significantly different. However, an examination of pregnancy and medically induced abortion rates reveals that the two countries are set apart. In the following section I examine pregnancy rates in North America. Included in this discussion is a detailed look at contraceptive attitudes, behaviour, and other individual and contextual determinants of unintended pregnancy.

Prevalence of Adolescent Pregnancy in North America

American Pregnancy Rates

It is clear from available statistics that the United States leads Canada as well as most other industrialized nations in teenage pregnancy, abortion, and live birth rates (Furstenberg, Brooks-Gunn & Chase-Lansdale, 1989; Irwin & Shafer, 1991). For reference, pregnancy rates are defined as the rate of live births plus the rate of induced abortions per 1,000 females 15 to 19 years old (American Medical Association, 1994). Currently, over one million pregnancies occur among teenage girls in the United States per year (Lansdale & Brooks-Gunn, 1994). Of those adolescent girls who become pregnant each year, about 40 percent have abortions, 13 percent have miscarriages, and 47 percent give birth (American Medical Association, 1994). During the early 1980's, the birth rate declined for a short period. In 1986, the birth rate was 50.6 per 1,000 (American Medical Association, 1994). However, since 1986, births to teens have markedly increased. For example, in 1989, the birth rate of 58.1 was the highest recorded rate since the early 1970's (American Medical Association, 1994). Notably, this increase has been particularly evident among teens younger than 18 years of age.

Some American researchers claim a decline in adolescent birth rates in the United States (Dryfoos, 1990). This view somewhat clouds the picture. In fact, the drop in adolescent birth rates is attributed largely to an increase in abortion rates. The abortion rate for 15 to 19 year olds was 38 per 1,000 in 1977 and 43 per 1,000 in 1981 (Gilchrist & Schinke, in Van Hasselt & Hersen, 1987). The point to be made is that one cannot assume that a decline in birth rate necessarily equates to a decrease in pregnancy or intercourse.

Generally, explanations offered by researchers for the high pregnancy and birth rate among teens include greater rates of sexual activity among American youth, lower levels of contraceptive use, as well as a larger proportion of intentional pregnancies. However, little consensus is found within the literature. If one considers the high rate of abortion, the idea of intentional pregnancy seems unlikely. The notion of a higher incidence of sexual activity is also disputed by similar Canadian trends in sexual behaviour. A plausible explanation for excessive pregnancy and birth rates is poor use of effective contraception and societal ambivalence towards the health and moral issues of human sexuality. These topics are more fully addressed in the sections on prevention.

Canadian Pregnancy Rates

In comparison, what is the prevalence of pregnancy and abortion in Canada? Interestingly, it has been reported that within a 20 year period, from 1960 to 1988, fertility rates dropped by more than one-half in adolescents between the ages of 15 to 19 years. Specifically, there were 58.2 per 1,000 reported pregnancies in 1961 and 26.4 in 1981 (Herold, 1984). Data from Statistics Canada, reported by Bibby and Poterski (1992) indicate that from the period 1975 to 1989, teenage pregnancies declined from 53.4 per 1000 to 44.1.

The abortion rate in Canada increased per 1000 women under 18 years of age, from 13.6 in 1974 to 16.2 in 1980 (Statistics Canada, 1981). However, a declining trend was evident in 1980 and 1981. It has been suggested that this decline, to some extent, may have been a result of the increase in number of teens who travelled to the United States to obtain an abortion (Herold, 1984). More recent survey data shows that only about two in 100 Canadian teenage women had obtained legal abortions in 1990 (Bibby & Poterski, 1992). These figures suggest that Canadian youth have a significantly lower rate of abortion than their U. S. counterparts. However, although the incidence of pregnancy and abortion is currently much lower for Canadian teenagers, let us not minimize the scope of the problem. Sexual intercourse is still a risk-taking behaviour; the outcomes of which continue to be of social, emotional, medical, and economic concern to many young people and their families.

Factors Contributing to Adolescent Contraceptive Use

Overview

In this section an attempt is made to uncover some of the key factors involved in and affecting adolescent contraceptive use, a central determinant of teen pregnancy. How does this relate to sexual risk taking? As a logical extension of decision-making related to contraceptive use, engaging in sexual intercourse without using contraception comprises an example of a risk taking behaviour, one that may compromise healthy development. Other examples of sexual risk behaviours include irregular, ineffective condom usage, intercourse with multiple partners or intercourse with high-risk partners such as intravenous drug users, and unprotected anal intercourse.

Whether explaining sexual activity, contraceptive use patterns, and or premarital pregnancy, much of the adolescent sexuality literature espouses multiple antecedents of adolescent sexual decision-making and actual sexual practices. Among the implicated variables are personality, biological, cultural, familial, academic, and cognitive (Holden, Nelson, Velasquez, & Ritchie, 1993). As with other risk behaviours, it is close to impossible to determine an explanation for why teens risk pregnancy or sexually transmitted disease based on exclusive demographic and psychosocial factors. Nor is it easy to discern a prototypic sketch of a likely candidate for teen pregnancy.

Some of the difficulty in the interpretation or prediction of sexual behaviour is a result of a lack of a unified research methodology (Morrison, 1985). For example, the causal relationship of demographic, personality, social, and cognitive factors to the use of contraception has not been adequately established. Many of the correlational studies attempt to infer causality, rendering the interrelationship findings inaccurate. Furthermore, several investigations package contraception under one broad category when evaluating contraceptive behaviour outcomes, or sexual decision-making. Yet as each method has its own success rate and method of application, it becomes difficult to generalize findings across studies. In addition, many studies often rely on behavioural intention, rather than actual behaviour when interpreting adolescent sexual decisions.

Another difficulty is related to sample selection. Frequently, youth who are attending a medical facility for birth control or psychological counselling serve as samples. It can be argued that this is not a representative sample of adolescents. Additionally, the problem of enlisting parental consent may bias findings. Teens may also be reluctant to report the truth as they see it or may exaggerate the facts.

A more promising trend is the interest in the study of male sexual practices. Much of the earlier research was limited to females, particularly females who used oral contraceptives (Herold, 1984). Perhaps because of the current emphasis on the prevention of AIDS and other sexually transmitted disease, more research attention has been given to male contraceptive practices. In fact, some reports on male condom use are encouraging. For example, new evidence demonstrates that the percentage of boys age 17 to 19 who reported using condoms has risen from 21 percent in 1979 to 58 percent in 1988 (Sonenstein, Pleck, & Ku, 1989).

Attitudes and Beliefs About Contraceptive Use

Among the few studies that have examined adolescents' attitudes and beliefs about contraception, some interesting findings have emerged. Herold (1984) reported that in planning to use contraception, some women believe that they will be perceived as promiscuous by their partner. Further, they believe that men might not be attracted to women who anticipate and plan for a sexual encounter (Herold, 1984). Although this researcher did not include male commentary, it seems reasonable to speculate that adolescent males might also be concerned that they would be perceived as sexually presumptuous or assertive. Some teens also prefer the spontaneity associated with unplanned intercourse, thus do not believe in using birth control.

A prevailing belief that often undermines responsible contraceptive behaviour is the notion of inconvenience. For example, certain methods are reported to be too messy, time consuming, or worse, may minimize sexual enjoyment. Related to that issue is embarrassment about purchasing birth control or about applying a contraceptive method in front of one's partner. It is believable that adolescents may have experienced or realistically anticipate a negative response from a health care professional if and when they ask to purchase birth control.

The exact link between contraceptive attitudes and behaviour is not clear. In a recent study, Barling and Moore (1990) investigated adolescents' attitudes about AIDS precautions and found that those who intended to use condoms had more mature attitudes towards sexual planning, were more knowledgeable, and expressed less negative attitudes towards condoms than those who expressed a lack of intention to use condoms or those who were undecided. In a study by Jaccard and Davidson (1972) and Davidson and Jaccard (1975) it was found that knowledge and attitudes accurately predicted intention to use the pill and further, intentions were strong predictors of behaviour. However, having a positive attitude about the merits of contraception in preventing pregnancy, for example, does not necessarily equate to regular or effective contraceptive behaviour. This is empirically demonstrated by the proportion of teenagers who report a negative attitude about pregnancy, yet who do not practice safe sex.

In short, it seems that adolescents tend to hold mixed attitudes and beliefs about contraception; its efficacy, safety, adverse effects, effect on sexual pleasure, convenience, and such. As well there does not seem to be a clear cut relationship between attitudes and behaviour. These realizations may be useful when disseminating practical contraceptive information and guiding adolescents towards responsible contraceptive behaviour. This topic is more fully discussed in the section on contraceptive education.

Contraceptive Behaviour: Research Findings

Having outlined some of the attitudes and beliefs about contraception, what is known about adolescent contraceptive behaviour? Although the majority of adolescents do not want to become pregnant and the percentage of teenagers reporting the use of birth control has increased over the last decade, a large number of youth fail to use, consistently, effective measures of contraception (Balassone, 1991). In fact, several researchers claim that adolescents, generally are poor contraceptors (Brooks-Gunn & Furstenberg, 1989; Irwin & Shafer, 1991; Herold, 1984). For example, recent evidence indicates that in the United States approximately 20 to 30 % of adolescents report that they contracept regularly (Chase-Landsdale & Brooks-Gunn, 1994). Particularly when adolescents first experience intercourse, as few as one third use any form of birth control (Herold, 1984). A recent American report claims that as many as 50 % of teenagers are not using contraception at their sexual debut (Chase-Lansdale & Brooks-Gunn, 1994). Notably, the younger an adolescent is at sexual initiation, the less likely is she/he is prepared to use birth control. Common reasons cited for not using contraception at first intercourse include: intercourse was not planned; they did not know about intercourse; they did not want to use contraceptives; contraceptives were not available; and pregnancy was not thought to be possible (Brooks-Gunn & Furstenberg, 1989). Factors reported to be linked to consistent contraceptive use include: level of commitment to the well-being of the partner; self acceptance as a sexual person; parents as sources of sexual information; and plans for the future that have social and financial support (Gordon & Gilgun, 1989).

When one critiques the literature on contraceptive behaviour, it is important to keep in mind how the measures of contraceptive use are demarcated. For example the term *use* may include whether a contraceptive has ever been used, is presently used, was used at last intercourse, or whether it was used at first intercourse. As well, the term *non-effective use* can be divided into use of an ineffective method, incorrect, or inconsistent use of any method, and non-use. In other words, the variable *contraceptive use* does not simply fall into the dichotomous category of *use or non-use* (Hagenhoff, Lowe, Hovell, & Rugg, 1987). In order to glean a better understanding of the actual behaviour it is important to know how the construct *contraceptive use* has been defined. Incidentally, the most often reported measures of contraceptive use are whether a contraceptive has ever been used and whether it was used at first intercourse (Morrison, 1985). Although these measures do give estimates of ever-used and never used contraception, clearly a more collective knowledge base would be advanced if more studies included a standardized range of methods used such as the pill, condom, or IUD, and indicated levels of contraceptive frequency.

Ideally, it would be least problematic if all sexually active adolescents made consistent use of effective contraception. That is likely an unrealistic expectation, especially considering that many adults are poor contraceptive users as well (Brooks-Gunn & Furstenberg, 1989). The following examination of a set of interrelated individual and contextual factors also demonstrates the complex nature of contraceptive behaviour in adolescents. Conflicting results from numerous studies add to the difficulty in determining which demographic, personality, and social variables influence patterns of contraceptive usage. Until this question can be more thoroughly addressed, the question of why some adolescents engage in unprotected intercourse or fail to consistently contracept, risk pregnancy, and or sexually transmitted disease remains unanswered. It is important, however to get an overview of the range and categories of correlates that have been investigated to date. If nothing else they provide a general, descriptive look at trends in contraceptive use and a common place from which to narrow the exploratory process.

Biological Factors

Genetic and hormonal changes occurring during puberty are correlated with an ability to engage in sexual activity (Irwin & Shafer, 1991). The temporal nature of these physiological developments, the rate at which they occur, and the concurrent psychological effects vary between individuals and among gender. For example, the age of menarche can affect sexual differences among adolescent women. It has been postulated that as a group, adolescent females are engaging in sexual intercourse at earlier ages today than 40 years ago, in part because the age of first menarche has decreased from 13.5 years to 12.5 years (Herold, 1984). Further, adolescent females who undergo earlier maturation tend to initiate early sexual intercourse. Conversely, late maturing females initiate sexual intercourse significantly later than their age-related peers (Irwin & Shafer, 1991). These same authors have documented that males who have undergone early maturation, and who have high levels of testosterone tend to initiate early intercourse. Moreover, early maturing males have a higher incidence of engaging in other problem behaviours, such as early onset of smoking and drinking, use of illegal substances, dropping out of school, and delinquency (Jessor & Jessor, 1990). How do these findings relate to contraceptive behaviour? Recall that early sexual intercourse has also been linked to a lack of, or delay in using contraception. Although there appears to be a relationship between early maturing adolescents and unprotected sexual intercourse, it is conceivable that these biological changes also interact with environmental influences. For instance an early maturing female may tend to become less involved with her family and more reliant on older, mixed sex peer groups any of whom might be sexually active (Chase-Lansdale & Brooks-Gunn, 1994).

In effect, it is not clear whether engagement in sexual intercourse increases androgen levels, specifically testosterone, or if a rise in hormonal levels promotes sexual intercourse.

Personality Correlates

A review of the limited research investigating personality factors distinguishes locus of control, sensation seeking, and self-esteem as variables associated with teenage fertility (Chase-Lansdale & Brooks-Gunn, 1994). An internal locus of control refers to one's perception that the course of his /her life is within personal control. The assumption is that those who demonstrate an internal locus of control should be more likely to plan and take actions necessary to direct events the way they wish them to occur. Individuals who have an external locus of control believe that forces outside themselves determine what happens to them and so should be less likely to take precautions to prevent pregnancy. Locus of control studies focus on measures of internal or external control in relation to contraceptive use including consistency of use and efficacy of chosen method (Morrison, 1985). Some studies support the contention that females with an internal locus of control are more likely to resist pressure to have intercourse and if they do engage in intercourse, are consistent users of effective birth control (Plotniuk, 1992). Other research demonstrates minimal, if any correlation between locus of control and pregnancy. Morrison (1985) concludes that locus of control may be related to use but not to method choice.

Self-esteem is another personality factor that has been associated with contraceptive use. There are two prevailing, contradictory hypotheses found in the literature. One hypothesis is that because premarital sexual behaviour is not socially accepted, teenagers who acknowledge their sexual involvement by obtaining contraception would have lower self-esteem than non-contraceptors (Lundy, 1972). Another hypothesis is that women with higher self-esteem are more easily able to acknowledge their sexual behaviour, require less social approval than women with low self-esteem, and be more likely to use contraceptives. (Herold, Goodwin & Lero, 1979; Herold, 1984).

There has been empirical support for high self-esteem and contraceptive use. For example, successful teenage pill users did have significantly higher scores on a self-esteem scale than did women who suspected that they were pregnant (Herold, Goodwin & Lero, 1979). Further, in a clinic study, Herold (1984) found that high self-esteem women had more positive attitudes towards the use of birth control, had less sexual guilt, and were using more effective contraception on a more consistent basis.

While some researchers have found a positive relationship, some have uncovered no relationship between self-esteem measures and contraceptive use (Garris, Steckler, & McIntire, 1976; Delameter & MacCorquodale, 1987). Yet others have reported a positive relationship between contraceptive use and self-esteem measures in a male sample (Geis & Gerrard, 1984) but no such association in a female sample.

It must be noted that many of the adolescents sampled for these studies may be different from other adolescent populations; adolescents who are attending birth control clinics may not be representative of a normative group of teenagers. It is also conceivable that socioeconomic status and racial differences contribute to self-esteem and subsequent use or non-use of birth control.

As outlined in chapter two, the personality construct sensation-seeking has been implicated in risk-taking behaviour, and as such includes early sexual intercourse. Arnett (1990) proposed that high levels of sensation-seeking, as measured by the Sensation Seeking Scale, corresponds to failure to use contraception in females. In a study using over 145 high school females who were on average 17 years old, Arnett (1992) found that among other variables, sensation seeking contributed to sexual intercourse without contraception. Notably, high scores on the Disinhibition and Boredom subscales of the Sensation Seeking Scale were correlated with failure to use contraception. Items on the Disinhibition subscale concern enjoyment of alcohol, and desire for novel experiences. Items from the Boredom subscale contains items that examine intolerance of routine and monotony. These are interesting findings; however, one question that is not addressed in this and other studies examining sensation-seeking is the degree to which sensation-seeking is attenuated or exaggerated by socialization factors.

Demographic Variables

Empirical evidence does not currently provide any agreement as to the exact nature of the relationship between personality correlates and contraceptive behaviour in adolescence. Other variables which have been extensively surveyed include demographics such as age and academic aspirations. Across most studies investigating these predictors of contraceptive use, it is apparent that similar to the personality studies, findings are not consistent. A few exceptions are noted. General support exists for a positive association between educational aspirations and contraceptive use. Higher educational goals and expectations are related positively to several measures of contraceptive use (Morrison, 1985). For example, in a study by Jones and Philliber (1983) never-users of birth control had lower educational ambitions than frequent or consistent users. In another study Hayes (1987) found that girls who were doing poorly in school, who had low intellectual abilities, educational goals, and motivation are more likely to become pregnant than those who are doing well in school.

Age is another variable that is generally reported to be a reliable predictor of contraceptive behaviour. Younger teenagers are less likely than older teenagers to use contraception. As well, young adolescents tend to use unreliable contraceptive methods such as withdrawal and generally lack sufficient knowledge about obtaining contraception. Clinical evidence for these findings is demonstrated by the high risk of pregnancy found in teenagers 15 years of age and younger (Herold, 1984). In a student survey conducted by Herold (1984) it was found that for those who had first intercourse under the age of 16, 65 % of the males and 40 % of the females had not used any method of birth control. By comparison, only 32 % of males 18 years and older and 19% of females in the same age group did not use birth control.

Socialization Factors

Many of the extant studies examining socialization factors such as family, peer, and partnership relations do not make distinctions between contraceptive behaviour and pregnancy when drawing conclusions about the nature of teenage sexual behaviour. For example, studies that cite family or peer influences in sexual behaviour relate them to early sexual activity. Often, it is assumed but not corroborated that early sexual activity is synonymous with non-use of contraceptives. Thus, it becomes difficult to determine whether social influences contribute to contraceptive decision-making alone or in concert with the timing of sexual intercourse; that is whether coitus occurs in early middle or late adolescence. Although this is speculation, it is also possible that relationships with family and friends can delay initial intercourse, but that delay does not necessarily accompany responsible contraceptive behaviour. Conversely, family and or peers may encourage, facilitate, or ignore the occurrence of early intercourse, but those possibilities may also be accompanied by the message to use contraception. In spite of the above inconsistencies, family and peer influences do shed some light into the complexities of adolescent sexual behaviour.

Familial influences.

Family influences in guiding an adolescent's sexual behaviour and more importantly his or her decision to use contraception include both socioeconomic status, family structure, and communication patterns. Socioeconomic risk factors linked to early sexual behaviour and pregnancy are poverty and reliance on welfare, large family size, and low levels of parental education (Chase-Lansdale & Brooks-Gunn, 1994). Irwin and Shafer (1991) report the following findings related to family structure. First, adolescents who live in nonintact families are more likely to initiate sexual intercourse earlier than adolescents who live in intact families. By implication, it is believed that the tendency to initiate early sexual relations is strongly associated with ineffective, or lack of, birth control. Second, and also related to family structure is the presence of consistent parental figures in the home. For instance, an absence of parental supervision and emotional distancing in the family has been associated with risk-taking such as substance use and sexual behaviour.

Others have speculated that the social and emotional isolation generated by some family systems is associated with premature, irresponsible sexual activity (Barnett, Papini and Gbur, 1991; Chilman, 1985; Fox, 1980). It has also been suggested that family communication patterns including methods of discipline and issues of parental control influence the risk for adolescent pregnancy. Miller, McCoy, Olson and Wallace (1986) found that adolescents whose parents demonstrated little monitoring of dating and social activities tended to engage in sexual intercourse at early ages. Interestingly, parents who at the other extreme exercised rigid disciplining measures also tended to have teenagers who were at a high risk for pregnancy (Peterson, Rolins, & Thomas, 1985).

The quality of family communication may be a factor associated with adolescent sexual behaviour. Some research suggests that adolescents who receive sex education at home and who are encouraged to use contraception are more likely to postpone sexual activity and more likely to use contraceptives (Shah & Zelnick, 1981; Inazu & Fox, 1980). Other researchers contend that open family communication has very little effect on contraceptive behaviour or age of sexual intercourse (Furstenberg, Herceg-Baron, Shea & Webb, 1984; Newcomer & Udry, 1985).I suggest that at the very least families who engage in open communication about sexual values and attitudes and are willing to answer questions that their teenagers may pose regarding sexual behaviour would encourage their children to make more informed sexual decisions.

The important social routes through which parents might at least indirectly influence adolescent sexual behaviour are summed up by Thorton and Camburn, in Adams, Montemayor & Gullotta (1989):

> 1. Parental attitudes regarding adolescent sexual behaviour may influence an adolescent's attitudes.
> 2. The marital and childbearing behaviour of the parents, including their experience with divorce, remarriage, may portray and support role models for the adolescent.
> 3. The religious environment of the home may influence the adolescent's attitudes.
> 4. The educational and work experience of the parents may influence an adolescent's attitudes and present opportunities for sexual experiences while the parents are away from the home (p.151).

Although the above discussion projects a rather mixed view of familial correlates of contraceptive behaviour, it is generally acknowledged that, on average, teens receive almost no contraceptive information from their parents (Herold, 1984). I believe that open communication about sex and specific instructions about contraceptive methods are central ingredients for healthy adolescent and family functioning. In turn, I suggest that healthy family communication patterns contribute to the development of a responsible, mature adolescent who is better prepared to plan for safer sexual encounters. In chapter five, I argue this point and demonstrate the value of flexible, open communication, particularly in the adolescent family.

Peer influences.

Peers may be yet another source of influence on teenage contraceptive behaviour. What is not known however, is the nature and extent of this role (Brooks-Gunn &

Paikoff, 1992) or how it differs from the influence of family (Herold, 1984). Much of the literature on adolescent sexual behaviour in general concludes that peers influence the initiation of sexual behaviour (Irwin & Shafer, 1991) as well as influencing attitudes and providing models for sexual behaviour (Smith, 1989). For example, peer contraceptive use has been found to be positively associated with the regularity and effectiveness of an adolescent's friend's contraceptive use (Jorgenson & Stostegard (1984). Smith also notes that peers also provide important physical scenarios in which a sexual encounter can take place, such as cars, and friends' houses.

A number of studies have indicated that an adolescent's friendships are heavily determined by the salience of adolescent sexual behavior (Herold, 1984; Jessor & Jessor, 1975) In other words the strong positive correlation found between a teenager's likelihood of having sexual intercourse and his or her friend having sex is seen as evidence that peers help to establish sexual behavioural norms. To illustrate, a study by Irwin and Shafer (1991) which surveyed 544 ninth grade students found that those students who perceived their peers to be engaging in risk reduced behaviours, such as safe sex, not using drugs and alcohol were less likely to engage in sexual intercourse and less likely to drink or use drugs. Conversely, students who reported using drugs and alcohol, and intending to engage in sexual behaviour perceived their friends as participating in the same behaviours.

Herold (1984) collected clinic sample surveys from females who were planning to use the birth control pill. Among the factors found to affect a woman's decision to use the pill, 87 % of those questioned had obtained specific information and support from girlfriends. In fact, Herold contended that one of the reasons that some girls delay getting birth control pills is because they do not have any close friends to offer any guidance.

In short, the evidence suggests that peers do influence adolescents' attitudes about sex and likely act as role models for contraceptive behaviour. To what extent the information offered is accurate or the modelling behaviour is responsible is still not clear.

Concluding Comments on Factors Affecting Contraceptive Use

To conclude this section on individual and social correlates of contraceptive behaviour, I rely on an extensive review by Morrison (1985). In her estimation there is little consistency in findings across theoretical domains. This researcher does highlight the few commonalities found in the literature on adolescent contraceptive use. These include the following. First, teenagers continue to remain relatively uninformed about reproductive physiology. Moreover, across groups there is a proportionately varied knowledge about methods of contraception other than the birth control pill. Second, adolescents do not like to use contraception. Third, personality variables such as sensation-seeking, locus of control and self-esteem are associated with contraceptive use, but the effects appear to be small and situationally determined. Fourth, chronological age and frequency of intercourse play a role in consistency of contraceptive use. Older teens and those who perceive themselves to be in a committed relationship are the most reliable users. Fifth, women who envision high educational aspirations report a higher incidence of consistent contraception. Academic performance remains poorly correlated with contraceptive efficacy.

An evaluation of an array of individual, personality, demographic, and social variables that are somehow connected to sexual risk-taking behaviour only partially explain its complex nature. What follows is a look at the role of cognitive processes and a social learning theory model, which when considered collectively, emphasize the importance of social context and cognitive development in affecting teenage contraceptive decision-making.

Theoretical Understanding of Adolescent Sexual Risk-Taking

Cognitive Processes

As a theoretical basis for understanding contraceptive behaviour in adolescents, the cognitive framework scrutinizes problem-solving, planning skills, and decision-making. Four acquisitions of formal operations normally thought to emerge around adolescence are implicated in teenage pregnancy. Gordon (1990) included abstract thinking, generating alternatives and courses of action, evaluating the consequences of these alternatives vis a vis propositional logic, engaging in perspective taking, and reasoning about probability and chance. In theory, a formal thinker allows for all possible alternatives to a situation rather than being tied to the concrete, here and now. This capability is essential for planning contraceptive decisions and pregnancy options. Adolescents, as neophytes of formal operational thinking do not appear to possess an entrenched ability or propensity to think in this fashion. It is this transitory nature which I feel contributes to a poor rate of success in areas of consistent rational, logical thinking. In fairness to adolescents, however I point out that not all individuals including adults, have access to formal operational structures and some do not make use of them on a regular basis. A study by Kuhn, Langer, Kohlberg and Hann (1977) demonstrated this. Only 30 % of a normal adult sample exhibited formal operational skills on a Piagetian task, while 15 % did not display any evidence of formal thinking.

The ability to evaluate alternatives and to anticipate the future requires the use of propositional logic and the ability to reason about if-then hypotheses. The weighing of possible outcomes and assessing alternate courses of action are difficult tasks yet are cited by various authors as major causes of failure to use birth control. For example, Cobliner (1974) informally compared pregnant and non-pregnant women and found that pregnancy was an unanticipated consequence of sexual activity for many adolescent females. He concluded that they were not fully capable of anticipating future consequences of present actions. Nonetheless, a more recent study by Adler and Dolcini (1986) determined that adolescents who were capable of assessing different options had a greater likelihood of a successful outcome and a greater commitment to the ultimate pregnancy decision.

Problems with objective perspective taking have also been thought to play a role both in effective contraceptive choice and unrealistic expectations of motherhood. From a cognitive perspective, female decision-making regarding abortion and pregnancy involves differentiating self perspective from other perspective as well as incorporating several individual needs into the final decision. The relative lack of decentering ability may add to the miscalculation of the enormous, lifelong task of parenthood.

Sexual risk-taking is also influenced by a poor grasp of the laws of chance and probability. Cvetkovich, Grote, Bjorseth and Sarkissan, in Gordon (1989) describe adolescent reasoning to be similar to the gambler's fallacy, whereby the chance of pregnancy is cumulative rather than independent for each episode of intercourse. Interestingly the miscalculation appears to operate independently of sex education.

These factors have important implications for understanding contraceptive behaviour as it relates to an adolescent's perception of susceptibility to pregnancy or sexually transmitted disease. It is also important to identify the more subjective and intuitive assessments of probability. Recall from chapter two, the representativeness and availability heuristics posited by Taversky and Kahneman (1980), as tools relied upon by teens to minimize the complexity of probability outcome. Representativeness refers to the likelihood that prediction of an outcome will be based on representation of the evidence. Thus, teenagers who assess their risk of pregnancy on the experience of peers may fail to use more reliable, statistical information. Availability refers to probability assessment based on the recall of past occurrences of a particular event. Those events which evoke emotional responses tend to be more salient and therefore are more often recalled than abstract, statistical information. These explicatives provide a reasonable explanation as to why an adolescent may focus on the negative aspects of using birth control as well as her propensity to underestimate probability of fertility.

A recent focus in cognitive literature has implications in this discussion: the recognition of competence and performance factors. For instance, an adolescent may have an appropriate level of competence yet may be unable to perform adequately (i.e. make decisions at a level made possible by such abstract reasoning capacity). This may be influenced, in part, by the specific content domain. Gordon (1990) identifies *global developmental delay* or an inability to reason formally in many or all areas versus specific formal operational difficulties. The global non attainment of formal operational structures implies that an adolescent appears not yet able to reason formally in areas of interpersonal and general non-social knowledge. It has been suggested that non-social knowledge gained from subject-object interactions and interpersonal knowledge obtained from subject-subject interactions does not develop in tandem. That is, knowledge attained through subject-subject interaction is more complex and inconsistent and therefore causes reasoning about interpersonal situations often to lag behind structural acquisition in the non-social domain (Block, 1983).

Tangentially related is the notion of asynchrony of formal structural development, where youth are able to reason sufficiently only in experienced domains. Research has demonstrated that knowledge of subject matter/task content does affect performance (Pulos, deBenedictus, Linn, Sullivan, & Clement, 1989) and that adolescents utilize a higher, more mature level of judgment in familiar situations. This seems plausible if one reasons that the area of sexuality, which includes issues such as values, norms, and attitudes, sex role concepts, and gender identity, is a domain which lacks an opportunity for application and consolidation of cognitive developmental mechanisms.

Furthermore, contraceptive decisions tap into several different realms of knowledge: moral; religious; social; medical; and interpersonal. When judgments have to account for different knowledge domains, Turiel and Davidson (in Levin, 1986) believe that the concept of salience prevails. They imply that this developmental phenomenon signals a failure to coordinate several important dimensions of a cognitive problem. Hence, conventional norms of the peer group and the immediate desires of self, boyfriend, or girlfriend serve as the salient features upon which a decision is made.

Social Learning Model

An alternative model based on social learning theory and cognitive development improves on the limitations of the individual, psychosocial variables presented thus far to explain the complex factors involved in contraceptive use among sexually active adolescents. Within this paradigm, sexual behaviour results from an interaction of personal, behavioural, and environmental variables (Bandura, 1977). In other words, external reinforcements, self-efficacy expectations, and outcome of behavioural expectations are influential in affecting the processes of learning. External reinforcements refer to the actual consequences associated with a specific behaviour. Outcome expectations are related to one's beliefs about what those consequences will be. Self-efficacy expectations are the person's perceptions about skill mastery. Modelling and imitation processes are also seen as powerful means of encouraging new behaviour, which is then reinforced by the social consequences of the behaviour (Hagenhoff, Lowe, Hovell, & Rugg, 1987). Applied to teen pregnancy this approach may provide a more integrative foundation from which to build explanations for contraceptive use and frequency of sexual intercourse.

Incorporating constructs from cognitive developmental theory as well as social learning theory, Balassone (1991) has proposed a model that, in my view, considers more fully, the utility of cognitive, developmental processes, and social contexts, in accounting for teenage contraceptive behaviour. Moreover, I recognize the impact this model has not only in explaining contraceptive behaviour, but as a valuable tool for promotion of adolescent sexual health. Specific components of the model are categorized into three domains, each with its own subdivisions: (1) Environmental context; (2) Cognitive influences; (3) Behaviour execution constraints. Each is discussed in turn.

Environmental context.

Three simple, noteworthy points are made by Bassalone (1991) in regard to the environmental component. First, teenagers must be exposed to accurate information related to sexuality, particularly reproductive health, sexually transmitted disease, pregnancy and birth control. Parents, partners, and peers need to be informed about the effectiveness of birth control and should take personal responsibility for information dissemination. Second, contraceptive services must be easily accessible and sensitive to the needs of teenagers. Particularly important is the provision of a sense of confidentiality and support. Third, responsible sex role models must be visible and available to adolescents who are just beginning to engage in sexual behaviours or to adolescents who may be ill informed about the consequences of sexual activity.

Cognitive processes.

Specific cognitive processes highlighted in this model are perception of need and consequences and decision making processes. As much of the cognitive influence centers on what has been discussed earlier under the topic of cognitive influences, I refer the reader to the aforementioned section and to the decision-making section in chapter two for a comprehensive review of this area.

Behavioural execution constraints.

The final component of this model involves factors most closely related to access to contraceptive methods and adolescent self-efficacy, and to some degree ability to problem solve. For example, obtaining and using birth control requires access to a method, either by attending a clinic or purchasing contraception from a drug store. If problems arise from use of a specific method an adolescent has to be able to make a decision about alternatives. Alternative choices are often predicated not only on perceptions of capability, but on contextual factors. Managing and controlling contraceptive behaviours becomes more difficult if, for example adolescents are preoccupied with family problems, relationship worries, or the particular physical environment they find themselves in when contemplating sexual intercourse.

Concluding comments on the social learning model.

Overall, the importance of this framework lies in its effort to include social contextual influences, and self-efficacy in mediating contraceptive attitudes and behaviour. As such, it provides some practical implications for designing adolescent reproductive health care services. My only concern about accepting this approach, is the fact that the role of physiological processes have been ignored. As was discussed, hormonal changes that occur during puberty do have a profound impact on adolescent sexual motivation and involvement (Brooks-Gunn & Petersen, 1984). Clearly, there would be advantages to including biological perspectives to this otherwise comprehensive model.

Towards Comprehensive Health

As a conclusion to this chapter, it seems appropriate to turn to the issue of effective intervention in the promotion of responsible adolescent sexual behaviour. Given their levels of information, their attitudes and belief systems, and their propensity to engage in other risk-taking behaviours such as alcohol and drug use, drinking and driving, it is not surprising that adolescents in general continue to engage in sexual risk-taking practices. Thus, when planning realistic prevention and intervention strategies, consideration must be given not only to chronological age, biological influence, and developmental status, but to parental attitudes, peer influences, situational variables, cultural beliefs and mores, individual goals and motivations, and the normative nature of the behaviour itself.

Responsibility for this global task needs to be shared among family, medical, and mental health services, educators, social policy makers, and teenagers themselves. This holistic, systems approach naturally emphasizes community involvement rather than individual culpability. Yet it must be made clear that this critical approach requires far reaching, fundamental, proactive changes to social beliefs and policy formation; ones that focus on sexual activity as a health rather than a moral issue.

I am not suggesting that we discourage sexual experimentation in adolescents. In fact, I think that teens may experience several positive outcomes from certain sexual activities. Naturally, we would be relieved if adolescents who choose to practice early intercourse would make use of contraception. It is hard for most people to believe that there are any benefits to intercourse without contraception. Yet I can think of at least a few. Consider a typical situation in which a teen who impulsively chose to have sexual intercourse did not plan to use contraception. Suppose, after the fact, he decided to discuss the experience with a friend or group of peers and was informed of the dangers of his sexual behaviour. Several benefits could occur as a result. It is possible that the teen may be strongly influenced by his peer group attitudes, thereby reevaluating his future sexual behaviour. For instance, from talking to his friends he becomes aware for the first time about the health implications of unprotected intercourse. He may decide that the initial sexual encounter was not as he expected and chooses to delay any further sexual activity until he is older. Another possibility is that he feels troubled about his behavioural choice and decides to speak to his partner about the nature of their sexual relationship and the importance of contraception. Any of these possibilities may also provide benefits in terms of developing sexual self-awareness, self-confidence in making sexual decisions, and may improve verbal and sexual communication in relationships.

When considering the possibility of negative outcomes of sexual experimentation, there is no guarantee that providing teens with accurate information about contraceptive use and the dangers of unprotected sexual intercourse, and providing them with convenient access to contraception will result in fewer pregnancies or eliminate sexually transmitted disease. However, I do not believe that the rates of teenage pregnancy and sexually transmitted disease are likely to decline unless parents, teachers, and health care professionals make a concerted effort to openly communicate with teenagers about both the practical health and moral issues surrounding sexual attitudes and behaviour.

We could learn from the social policy promulgated by the Swedish government. Quite simply, it advocates the instillation, at an early age, an acceptance of sexuality and an understanding of the appropriate means available to ensure a protected sexual relationship. In commenting on the low incidence of unintended premarital pregnancy in that country Brown (1983) remarks that it is primarily the result of:

> ...a close partnership between the schools and the family planning services; easy access to contraceptive services; the widespread use of such services by young people;...sexual decisions equally shared by young men and young women; a general cultural acceptance of sexuality as part of intimate relationships...and

> politically secure legislation on contraceptive and abortion services which makes them legally and easily available (p.95).

I have suggested that sexual risk-taking is becoming a normative adolescent behaviour, which is not necessarily linked to psychopathology. Furthermore, it is likely part of a syndrome of other health risking behaviours (Jessor & Jessor, 1977). However, while indexing sexual experimentation as typical and possibly adaptive, we must not lose sight of the possibility of adverse health, emotional, financial, educational, and developmental consequences of unprotected intercourse and pregnancy. In order to get a fuller picture of the dynamics involved in sexual decision-making, and in order to devise effective educational programs, I think it becomes necessary to evaluate two propositions. First, I believe that health care professionals, families, and teachers would benefit from considering the possibility that teenagers who engage in sexual risk-taking behaviours are not deviant, socially corrupt, or intellectually deficient. Instead, it would be more fruitful to consider the idea that sexual experimentation is a part of a healthy process in adolescent sexual identity formation and autonomy. Second, in the spirit of expansion of perspective, we must be willing to draw on the expertise from many disciplines. An integration of theoretical and clinical knowledge from biology, medicine, sociology, anthropology, and psychology would allow for more in-depth insight into adolescent sexual risk-taking behaviour. Perhaps, too, North American health policy directives would gain an advantage by a review of other countries' approach to adolescent psychosexual development.

CHAPTER 5

A Beginning Therapist's Guide to the Adolescent Family System

One of the central premises of this chapter is that the enormous changes required of adolescents and their families as they struggle with this new developmental phase is quite typical. Further, many of the symptomatic, risk-taking behaviours evidenced by a youngster may be affected by adjustments in family structural organization, adaptive functioning, and communication patterns.

In this chapter family therapy is considered as a valuable intervention to assist families with adolescents. In so doing, I first review core issues central to adolescent identity development and autonomy, their relationship to risk-taking behaviour, and their impact on adolescent-parent interaction. Next, I discuss parental life cycle issues equally influential in the workings of the family. Third, I evaluate family assessment models currently cited in the mental health literature to conceptualize dimensions of family behaviour. Fourth, and finally, I lay the foundation for family therapy as an intervention particular to the adolescent family, borrowing from developmental theories and family system constructs. It is hoped that this information will be of use to mental health care practitioners unfamiliar with the maturational trajectories of adolescents and their families. Special consideration is given to adolescents who are labeled risk-takers.

As Fishman (1988) suggests, family therapy is the most powerful social intervention for working with adolescents. In his view, the family is the social pivotal point in which an adolescent develops and from which he eventually emerges. To what degree this developmental process occurs will depend, to a large extent, on the nature of existing relationships within the family context. Because the adolescent is part of a family system, his or her developmental tasks do not occur in isolation. The adolescent-family system (Berkowitz, 1987) has within it developmental issues of the parents, the adolescent, and other family members, collectively and separately.

What are the developmental tasks of adolescence that affect family functioning? Further, what are some issues present in the family which influence an adolescent's development? A model of family functioning which offers an interactionist, contextual perspective when discussing these questions is family systems theory. Of central import in this framework is the notion of circularity of interaction patterns and the hierarchical arrangement of subsystems, each equipped with varying degrees of power. In this regard, a family can be defined as a social system that is united by rules and patterns governing communication skills, cognitive belief systems, and methods of preservation (Nichols & Schwartz, 1991).

Major Developmental Issues Of Adolescence

Psychodynamic Interpretation Of Developmental Tasks

The relatively stable structure of family relationships and patterns of generational communication can change drastically with the onset of adolescence (Mirkin & Koman, 1985). In light of the adolescent's quest for individuation, the search for identity and consolidation of character, the following intrapsychic and interpersonal tasks in part contribute to the significant alteration in family dynamics. Within the psychoanalytic conceptual frame and drawing from ego psychology constructs, Blos (1967) has referred to adolescence as the process of *second individuation*. As such, it is a task requiring a shedding or lessening of dependency on the family as a means of preparing for a life outside of the family unit. These changes to psychological structure can be more commonly viewed as separation, or development of autonomy. Blos coined the term *psychological weaning* to define this crucial process. (Muuss, 1987). As I understand it, the central objective is to achieve a comprehensive, mature ego identity: a sexual, social, and individual identity, separate and distinct from parents. More specifically, accompanying an increase in libidinal drive is a corresponding "loosening of infantile [love and hate] object ties in order to become a member of the adult world" (Blos, 1967, p. 163). It follows then that a resurgent sexual drive coupled with a lessening of familial and idealized attachments might render an adolescent, at the very least, overwhelmed.

In the words of David Wexler (1991) "this stage may leave teenagers psychologically stranded and defenseless" (p. 31). In their attempt to progress to fuller maturity and deal with the increased anxiety and internal conflict common to this developmental process, adolescents appear to regress to earlier, immature response patterns. Blos theorized that these typical responses including narcissism, oral greediness, and sadism are most clearly observed in behaviours such as rebellion, arrogance, and challenge to parental authority. Thus, it is not a far stretch to speculate that experimental or risk-taking behaviours might be part of an adolescent's effort at individuation and autonomy.

It should be noted, however, that both Blos and Wexler maintain that this is a normal course of events which, when proceeds successfully, allows for a mature entry into adulthood. In fact, Blos clearly stated that an inability to complete the task of second individuation and disengage from infantile love objects "interferes with the future task of finding extra-familial ties of affection, impedes movement towards autonomy and independence, and *may contribute to deviant development and psychopathology*" (italics mine).

Kohut's (1972) theory of self shares this view of normalizing the second individuation process. He claimed that the extreme narcissism of adolescence is reflective of healthy personality development. He states:

> The teenager who has enveloped himself or herself in a cloud of narcissistic self-involvement is often engaging in an essential and functional life task. This is true despite the bizarreness of the behaviours and moods and despite the enormous grief caused to parents, school systems, mental health providers, and often to society in general (p.32).

In his descriptive, psychoanalytic account of emotional development, Winnicott (1971) provides additional support for adolescent experimentation as part of the normal course of maturation. For example, he views the potential for aggressiveness and more importantly, rebelliousness to be inherent to adolescence. Although more systematic study generally refutes this ontological claim, as most adolescents do manage to get along with parents and other adults, it might be useful as a normalizing construct; one that lends credence to risk-taking as typical, if not healthy, behaviour of an adolescent making sense of the world.

In her seminal psychoanalytic work on adolescence, Anna Freud (1958) pronounced: "(1) that adolescence is by its nature an interruption of peaceful growth, and (2) that the upholding of a steady equilibrium is in itself abnormal" (p.275). Her position suggests that adolescent upheavals are observable indications that he or she is qualitatively and quantitatively re-calibrating or adjusting libidinal (sexual) energy to an adult status. To answer the oft asked question, How does this theory account for those teens who do not appear to manifest any angst?, Freud argues that these youths are experiencing a delay in the normal maturational process. As such, she believed them to be excessively defended against their drive activities, heightening the risk of neurotic or psychotic pathology. It is her closing argument that lends itself nicely to one of the tenets of this chapter:

> While an adolescent remains inconsistent and unpredictable in his behaviour, he may suffer, but does not seem to me to be in need of treatment. I think he should be given time and scope to work out his own solution. Rather it may be his parents who need help and guidance as to be able to bear with him (p.276).

In short, three prominent features characterize the psychodynamic perspective. First, adolescence is viewed as a stage of personality reformation and vulnerability as a result of resurging libidinal instincts. Second, behaviour is likely to be maladaptive, reliant upon primitive defense mechanisms and reflective of attempts to cope with inner conflict. Third, the process of individuation, disengagement, and experimentation are considered necessary prerequisites for mature emotional and sexual relationships (Coleman, 1987). These are useful constructs when arguing for risk behaviour as a *normal* activity of an adolescent and when explaining adolescents' seemingly irrational behaviour to their confused, desperate parents.

Psychosocial Interpretation Of Developmental Tasks

Another task of adolescence, and closely related to autonomous development, involves the formation of *ego identity*. In the context of an epigenetic, psychosocial model of human development, Erikson (1968) defined adolescence as a period in which one must establish a sense of personal identity. This search involves the establishment of a meaningful self-concept out of the remnants of childhood and the hopes of anticipated adulthood (Fishman, 1988). In other words, the adolescent must actively answer for himself, who he is, where he came from, and what he is to become (Muuss, 1988). Ultimately, with the provision of a sense of consistency and coherence, one establishes a relatively unified sense of self which guides and regulates interpersonal behaviour.

According to Erikson, childhood issues of trust, self-maintenance, and industrious activity underscore adolescent identity formation. Building upon Erikson's work, Marcia (1966) developed an identity status model to demarcate separate levels of identity development. These four levels include identity diffusion, identity foreclosure, moratorium, and identity achieved. Briefly outlined, individuals who commit to an ideology or behavioural pattern following an active period of exploration (crisis) are referred to as identity achievers; those who adopt commitments without a period of exploration are viewed as foreclosures; those who are in the process of exploration but have not yet solidified their commitments are classified as moratoriums; and those who lack both commitments and exploration are termed identity diffusers (Jones, 1992).

It is necessary to draw a clinical distinction between a moratorium adolescent who is in an acute crisis and actively searching for an identity and the identity diffused or confused adolescent who is alienated and abandoned any search for identity. This distinction must be demarcated so that health care professionals and others who work with adolescents are more equipped to discern pathology from healthy developmental processes. However, at first glance, it is by no means easy to differentiate a moratorium adolescent who takes risks from an identity diffused adolescent who takes the same risks. Yet, as has been mentioned, in relation to risk and definitions of health, an attempt must be made to distinguish between them.

An individual who is engaging in risk-taking behaviours as part of trying on a particular identity, or rebelling against traditional family values as a means of differentiating from his parent (moratorium subject) does not appear to be motivated by the same objectives as a teen who has failed in his search and has opted to engage in risks in order to attenuate the anxiety that role diffusion creates. Most who write of the moratorium of adolescence promote it as a positive experimental process, critical to forging identity and commitments. As such, it could be viewed as central to healthy psychosocial development. That is not the case with identity diffusion. While Erikson maintains that identity diffusion is not a diagnosis of a psychological problem but rather a description of a normal developmental process (Muuss, 1988), others (Mitchell, 1992) consider it to be a "profound malfunction within identity formation" (p.152). In fact, Mitchell claims that [identity diffusion] "involves a deterioration of the entire personality" (p.152). A teenager who manifests pathological identity diffusion experiences serious emotional disturbance which Mitchell (1992) notes as a self destructive preoccupation with narrow activities, incapacity for intimacy, isolation, and utter disdain for community standards.

I think that these theoretical constructs, namely identity moratorium and diffusion, could be valuable tools for family therapists in their effort to unravel some of the complexities associated with adolescent risk behaviour. The issue then becomes how health care professionals can make a clinical distinction between unhealthy atypical, deviant behaviour and normal, typical exploratory behaviour using these identity states. Although both the moratorium and identity diffused adolescents could witness an appreciation of risk behaviours, I suggest that one way we could specifically mark the identity status, and thus estimate current psychological health of adolescents, is by determining both the *degree* and *extent* to which a risk behaviour or several risk behaviours are manifested. In other words, a practitioner would be interested in finding out from a teenager the frequency and regularity of risk behaviour or behaviours, and circumstances precipitating risk-taking. If drugs, alcohol, or cigarettes are among the risks, it is important to determine the quantity used at one time and over a period of time. I have chosen both *degree* and *extent*, in part because they fit most easily along a health continuum and in part because of the difficulty in using *type* of risk. Determining which *type* of risk is viewed as more destructive or health compromising than another is dependent upon whose perspective is solicited. Clearly, being 15 minutes late for curfew does not seem as much of a health or emotional problem as overdosing on cocaine, drinking and driving, or engaging in unprotected intercourse. Yet, if an adolescent is physically abused by an alcoholic father when he returns home late, then his tardiness may be considered very risky.

As was suggested in the chapter on drug abuse, the more risk factors an adolescent has, such as early age of onset, high frequency of use, and family history of substance abuse, the more likely he is to advance from a drug user to a drug abuser. Therefore, it is possible that, along with the *extent* and *degree* of risk-taking, another way to evaluate individual identity status and psychological well being is by identifying the *number* of risk factors an adolescent possesses. An adolescent who is merely experimenting with drugs, has no family history of drug abuse, and who uses drugs infrequently or only at certain social gatherings, could conceivably be labeled a moratorium adolescent or an adolescent in identity crisis. Both of these states have been considered beneficial to one's general psychosocial development. Alternatively, a teenager who drinks substantial quantities of alcohol on a regular basis, who drinks alone, who has a family history of drug abuse, and who began drinking at an early age, could be labeled an identity diffused adolescent. One must also take into consideration the chemical nature of the drug itself. Recall that drugs have different addictive properties. Experimentation with a highly addictive drug such as heroin, is more likely to result in physiological dependence much sooner and possibly with graver consequences, than experimentation with nicotine or alcohol.

When applying the notion of *extent* and *degree* of risk to teenage sexual behaviour, the distinction between moratorium and diffused identity seems less clear. For instance, how frequently would a moratorium adolescent engage in premarital, unprotected intercourse? Would a moratorium adolescent have multiple partners? Would a moratorium adolescent engage in anal sex? However, in light of what was discussed in chapter three, one could speculate that teens who begin their sexual debut at an early age and who continue, regularly, to engage in unprotected intercourse with multiple partners and/or who undergo several abortions, or have incurred sexually transmitted disease could be viewed as struggling with identity diffusion. At the very least, identity diffused individuals could be using risk-taking behaviours as a coping strategy for much different reasons, and likely in less adaptive ways than moratorium adolescents.

Correlational research has demonstrated that the quality and type of family transactional patterns (or at least family perceptions of family socialization styles) can influence if not determine identity status. In theory this would also help to explain the presence and extent of risky behaviour. Notably, families which are supportive, are highly involved with their adolescents, and provide some degree of confrontation and discussion tend to have identity achieved or moratorium adolescents, while emotionally distant and rejecting families tend to have identity diffused youth (Hsu & Hersen, 1989). Adams, Dyck, and Bennion (1987) summarize findings from additional research which suggests that moratorium and achievement are associated with adolescent perceptions of low maternal control/regulation, maternal encouragement of independence, paternal fairness in discipline with moderation in praise, high companionship, physical affection, support from parents, and parental perceptions of independence. Moratorium is also characterized by maternal perception of low affection towards their adolescents. Achievement status is characterized by maternal perception of high affection towards their adolescents.

How does all of this information relate to risk-taking behaviour, to the family and to family therapy? In review, since the moratorium stage is noted as an essential prerequisite for the achievement of identity (Muuss, 1987) and since it also involves an acute stage of crisis and temporary commitments, if any, then it is conceivable that drugs, alcohol, and sexual experimentation might be an integral component of this status. However, an identity diffused adolescent, characterized as one who lacks commitments and who has not experienced a crisis (Marcia, 1967) may just as likely demonstrate problem behaviours. As was suggested, it may be that the extent, and degree of risk behaviour and number of risk factors discriminates identity diffused from moratorium youth. How then, would a family therapist treat a transitional, age appropriate identity moratorium adolescent, and an identity diffused or confused adolescent subject to more extreme forms of pathological disturbance? This is a difficult question to answer and deserving of more than the limited empirical research available on the subject. If one accepts Erikson's notion that some degree of identity diffusion is common to the period of early adolescence, then it seems sensible to assume that it is a transitory phenomenon, along with the moratorium status. As such, both a moratorium and identity diffused adolescent could be seen as normal and more than likely responsive to a brief family therapy intervention. Alternatively, if one accepts, as I do, the idea that identity diffusion signals a pathological exaggeration of an identity crisis (Mitchell, 1991) with more deleterious and far reaching consequences (such as drug abuse) then such an individual and his family might require a more intensive form of therapeutic intervention (i.e. hospitalization, and a combination of family, individual, and/or group therapy).

This is not to say that family therapy is only effective in the treatment of moratorium teens and not effective in treating identity diffused adolescents. Rather, the point is that if therapists are willing to utilize the identity constructs, notably moratorium and identity diffused states, if we are able to identify the *nature*, *extent*, and *degree* of the risk behaviour, and if we observe family patterns of communication collectively for clinical assessment purposes, then perhaps practitioners can more accurately determine if an adolescent's risk-taking behaviour is part of a healthy exploratory process or an indicator of individual or family psychopathology. If this is accomplished, a therapist will have a clearer picture of the nature of the family's problem and be able to recommend the most appropriate form of treatment.

Cognitive Developmental Tasks

Within the cognitive domain, an additional responsibility of adolescence is the conquest of narcissism and the transcendence of egocentric thought. Briefly, to recap what has been stated earlier, adolescent egocentrism and narcissism are viewed as natural components of the developing and fluctuating formal operational processes of cognitive thought. Chandler (1975; 1987) contends that formal thought also governs the emergence of "epistemological relativity and loneliness, skeptical doubt and Cartesian anxiety." More plainly, this implies that teens are ensconced in their own subjective reality, preoccupied with internal doubts and entitlements. Behaviours characteristic of this cognitive shift, according to Chandler, are: impulsivism or acting without thought, intuitionism or doing what feels good, conformism or doing the done thing, and indifferentism or acting on whim (Montemayor, Adams, & Gullotta, 1990, p.187).

As we learned in chapter two, the twin constructs, personal fable and imaginary audience are an integral part of the transition to formal operational thought. In review, the imaginary audience is expressed as an exaggerated self-awareness and a heightened self-consciousness (Mitchell, 1992) which describes the adolescent's tendency to anticipate the reactions of others to the self in imagined or real situations (Lapsley, in Montemayor, Adams, & Gullotta, 1990). The personal fable is the adolescent's belief of personal uniqueness, omnipotence and invulnerability.

As a manifestation of the ascension of more complex thinking, and the workings of the personal fable and the imaginary audience, the adolescent may be naturally inclined to believe himself to be the focus of family attention; one who is excessively preoccupied with self-interests and realities. There is little room in the adolescent mind to consider the perpetual give and take which occurs in family living. Nor is he given to respond to situations without the use of affective logic. Used as his primary thinking mode, he is likely to make judgments and decisions based on emotional content (Mitchell, 1992). Moreover, he may be inclined to believe in the notion of self-invincibility or indestruction. As was also discussed in an earlier chapter, this persistent distortion of the laws of probability may also foster an adolescent's seemingly reckless or risk-taking behaviour. The inability to conquer these developmental tasks may leave youth more susceptible to intrapsychic and interpersonal dysfunction. The prevailing sense of omnipotence and lack of accommodation to others needs, compromises both adolescent maturation and family functioning.

In sum then, the tasks which have been reviewed above and which must be actively mastered by an adolescent are primarily those of personality, ego development, and cognitive thought. Included are the transformation to increased autonomy and the search for a personal, social, and sexual identity. Both psychodynamic and psychosocial interpretations contribute to an understanding of this multifaceted process. Furthermore, underlying these tasks are biological maturation, emotional vulnerability, and cognitive complexity. As well one has to be aware of adolescents' seemingly paradoxical need to remain connected to meaningful others while at the same time attempting to individuate (Blasi, 1988; Grotevant & Cooper, 1983; Hauser & Follansbee, 1984; Josselson, 1980). To place these milestones in a broader context, and to recognize the reciprocal nature of the adolescent-parent relationship, it becomes necessary to examine the family life cycle. The following section provides a brief outline of parental tasks and issues corresponding to the adolescent family stage.

Life Cycle of the Adolescent Family

Family life cycle theory suggests that there are developmental processes experienced by most people as they move from one family stage to another. Accompanying these transitions is a normal degree of crisis, influenced to some extent by the prevailing culture and socioeconomic class. Of import to this discussion, however, is not so much the external influences, such as the cultural and economic status of the family, but the internal resistance of family members to the facilitation of development. An explanation and analysis of common resistances will follow.

The first detailed description of the family life cycle from a systems perspective was suggested by Jay Haley (1973). Haley considered symptoms to occur in family members at points of transition or crisis between stages primarily because the family was unable or afraid to make the transition. Since then family therapists have elaborated upon the work of Haley, adding to it the stages of divorce and remarriage and emphasizing the notion of a gradual, oscillating process (Nichols & Schwartz, 1991). Much of the existing research, unfortunately, has relied extensively on the use of two parent, Caucasian families. There is still comparatively less known about blended families, or families with divorced parents, single parents, or same sex parents (Grotevant, 1994).

Psychoanalytic family therapists have also utilized this construct and from a multigenerational perspective, suggest that family development, as with individual development, can become arrested at particular stages. Finally, a noteworthy point about life cycle stages is that although they can result in periods of growth, there is a corresponding sense of loss (Berkowitz, 1987). For instance, when a child initiates independent behaviour, his parents' unresolved grief over their own past losses, feelings of abandonment or loneliness may interfere with the parents' ability to provide a balanced, supportive perspective. It is the feeling of loss and despair which constitute a resisting force and may contribute to the transition difficulty experienced by family members.

With particular reference to the adolescent phase of the family life cycle, it is recognized as one which extends from the oldest child's entry into adolescence through the last child's initiation into adulthood. As such, most parents themselves are entering middle age. This generally means a time in which parents are reassessing their own collective and individual career, relationship, and financial goals, and expectations. (Mirkin & Koman, 1985). Thus, marital separations, divorce, and remarriage are not uncommon during this stage. Grandparents may become more of a focus for the family as they approach retirement, or death. Unresolved conflicts between parents and grandparents may resurface, exposing parents to charged emotional issues from their own family of origin. Particularly, parents may re-live their own separation and individuation experiences, which in turn affects their children's more immediate exploratory experiences. For example, one or both parents may attempt to avoid the mistakes that they felt their parents had made. If a parent remembers her own parents as strict and unresponsive, then she in turn may choose to be an overprotective, undisciplined parent, offering little in the way of structure and guidelines. This reaction may serve to undermine an adolescent's autonomy, straining both the parental-adolescent dyad and the marital dyad.

While describing the adolescent family stage, a definition of a well adjusted family is also necessary. In general within a functional, healthy family system, stable roles, differential levels of power, and flexible patterns of interaction have usually been established by the time of adolescence. Fogarty (1976a) in Systems Concepts and the Dimensions Of Self, considered twelve characteristics of well-adjusted families:

(1) They are balanced and can adapt to change;
(2) Emotional problems are seen as existing in the whole group, with components in each person;
(3) They are connected across generations to all family members;
(4) They use a minimum of fusion and a minimum of distance to solve problems;
(5) Each dyad can deal with problems between them;
(6) Differences are tolerated even encouraged;
(7) Each person can deal on thinking and emotional levels with the others;
(8) Each person is allowed his or her own emptiness;
(9) They are aware of what each person gets from within and from others;
(10) Preservation of a positive emotional climate takes precedence over doing what is right or what is popular;
(11) Each member thinks it is a pretty good family to live in;
(12) Members of the family use each other as sources of feedback and learning not as emotional crutches.

Rather simply, a healthy family tends to operate in a balance between cohesiveness and adaptation (Kirschner and Kirschner, 1986). More specifically, when observed from a family systems view, a well family process demonstrates clear generational boundaries, complementary roles, effective interpersonal communication, as well as encourages the expression of personal individuation. In relation to the parental dyad, Kirschner and Kirschner (1986) determined that the most important factor associated with healthy psychological adolescent functioning was a positive marital interaction punctuated by a high level of intimacy, respect, trust, and mutual enjoyment. Earlier research supported recommendations for less parental involvement and emotional distancing. More recently, writers on this topic recognize that this approach can negatively affect adolescents; in particular there becomes a tendency to affiliate with antisocial, risk taking peer groups (Hill, 1992).

In forging a new alliance with their adolescent offspring, parents need to provide a facilitative or holding environment where their children are both protected and encouraged to become independent and to form a stable ego-identity (Coleman, 1987). Grotevant and Cooper (1985) determined that this leaving process is best facilitated by separateness, which allows for a development of a personal point of view in the context of connectedness, which provides a secure base from which an adolescent can explore extra-familial relationships. This critical parental task may be accomplished by the provision of a secure, responsive, communicative, emotional closeness, neither withdrawing from, nor devaluing the adolescent. An effort should be made to transform the parent-child relationship from unilateral dependence towards reciprocity and a balanced interdependence (Hill, 1992). However, this may prove difficult when adversarial, ambivalent teens threaten to sabotage the relationship and when parents have had little experience with or tolerance for such an approach. Again, in recognizing that not all families will undergo serious conflict during the adolescent transition, this process may require subtle adjustments to the existing relationship rather than revolutionary, drastic alterations to family structure and communication.

According to Kohut's theory of narcissism, in Mitchell (1992), if the adolescent is to realize his own emotional strength he will require an ongoing nurturance of two basic needs: the need to be mirrored and the need to idealize. Mirroring refers to the child's wishes to have his accomplishments acknowledged and honoured. Through this process of being valued by another, an adolescent can develop a cohesive sense of self (Wexler, 1991). Examples of critical family mirrors are parents and/or grandparents. Being provided with realistic and empathic reflection allows children to define themselves and believe in their attributes. Idealization refers to adolescents' adult object choices whom they admire and with whom they identify. In theory, relating to an idealized parent or adult other fulfills the need to feel connected to something larger than themselves, who is both protective and nurturant.

Ineffectual mirroring by parents (often as a result of their own unmet needs) and the failure to idealize (occurring if parental figures are emotionally or physically absent) can result in a damaged self, dealing a strong blow to mature development. This minimal or narcissistic self, rather than being absorbed by grandness and security, is propelled by a deep rooted anxiety and insecurity, disconnected from family and from society. This is a common struggle for selfhood that is not necessarily resolved during the period of adolescence. In fact, Lasch (1984) suggests that as our North American culture is a narcissistic one, there is little hope for adolescents to move beyond this void. The anomie that was once reserved for youth, it has been argued, is now common to all societal levels. This proposition, albeit slightly negativistic, serves to fuel an argument for a family systems approach; one that treats, communicates, or corroborates with an entire system.

Many of these tasks are not problematic for healthy families who are already emotionally attached to their children and who practice flexible yet authoritative parenting styles. They become difficult accomplishments for some parents especially for those who have not, themselves, had the benefit of such a positive family relationship. Some families, for example, will resist an adolescent's desire for separation with prohibitive force, endangering phase-appropriate independence. Kohut, in Coleman (1987) considers this behaviour to be regressive and from a psychoanalytic view, reflects parents' own underlying narcissistic fixations including issues of loss and abandonment. In other words, the adolescent is perceived as an extension of self that is vital to its function, rather than an independent separate entity. As such, the parents cannot perceive the adolescent as autonomous. Termed *object possession*, it is a claim for absolute and omnipotent control. Observable indications of efforts to prolong separation might take the form of rage, bribes, parental physical illness, and in some cases incestuous relationships (Hauser, 1991; Berkowitz, in Coleman, 1987).

In review, while placing the adolescent in the context of the family life cycle, I have identified core developmental issues of adolescence from a psychodynamic (internal) and psychosocial (external) theoretical stance. Both perspectives are valuable in approaching a more comprehensive framework for understanding the individual and his family. Implicit in this discussion is the reciprocal nature of the adolescent-parent relationship while re-negotiating family intimacy. As well, an attempt has been made to bridge the theoretical construct of identity formation to the complexities of risk-taking behaviour. Presently, I examine assessment strategies and treatment protocols for those beginning therapists who work with typical teenage families.

Assessment and Treatment Guidelines for the Adolescent-Family

In a recent review of the family therapy literature, there is considerable material available for the identification, assessment, and treatment of disturbed or pathological adolescent families. I refer the interested reader to Scharff (1991), Wexler (1991), and Hauser (1991) for theoretical foundations and clinical strategies particular to this more troubled population. For the otherwise healthy families who are simply not managing the normal transitional period of adolescence, there is a dearth of general assessment tools and treatment alternatives (Karpel & Strauss, 1983; Worden, 1991). The intent of this section is to address this void for beginning therapists by critiquing a widely employed model in the initial assessment of family dynamics, by outlining the general therapeutic implications for dealing with an adolescent family and by detailing effective, general techniques to working with this network.

In pursuit of a family systems approach to treatment, an assessment is the necessary logical initial step in the collection of the wealth of available data from each contributing member. From a thorough assessment, working hypotheses are made regarding an adolescent's symptoms and appropriate intervention, in light of developmental and family contextual dynamics. In general, assessments can reveal stable and unstable families, emotional and physical illness, marital discord, and more specific problems in the relationships of parents, children and adolescents. Historically, within the family therapy paradigm, much of the assessment process was limited to therapists' inferences and qualitative observations made during the initial interview. Several of the well known and published systems family therapists described their own process for assessing families, largely based on their particular theoretical preference. For example, Haley (1967) strongly objected to a focus on assessment and diagnosis, claiming that it was simply a device to deal with the therapist's anxiety (Mischne, 1986). Instead he recommended observing how the parents and children interact, how the problem is presented, the family seating arrangement, who interrupts who and how often, who does the talking and who does the interrupting. Minuchin (1974) would look for ineffective interactions but more importantly he would observe ways in which boundaries were maintained. Satir (1967) utilized a life chronology or history-taking method, gathering information about the marital relationship, how disagreement is dealt with, and parental and child expectations (Walker & Roberts, 1983). These are valuable suggestions, however it seems that a more comprehensive, empirical method of classification be available for less seasoned health care practitioners.

Fishman's Four Dimensional Model

Fishman (1988) relies on a four dimensional model of assessment, incorporating the contemporary developmental pressures of the family, history, structure, and process. Moreover, he considers a brief family therapy approach to lead to a more rapid alleviation of symptomatic behaviour.

As Fishman explains it, the contemporary developmental pressures of the family are seen as stressful, destabilizing events which undermine equilibrium and stability. Families ill equipped to transcend or change tend to develop symptoms. For example, in a family in which the parents are dealing with a career or job change in addition to raising one or more adolescents who are also in the midst of mammoth developmental change, one or more of the members may engage in disruptive, risky behaviours. Chief among them may be poor school performance, alone or in concert with drug or alcohol use, and/or early unprotected intercourse. Knowledge of this developmental dimension of family functioning facilitates treatment objectives.

The second dimension includes the history of the system which provides important information regarding the chronicity and severity of family dysfunction. It is my belief that the therapist's role in this process is to encourage each family member to recount his or her impressions of the family history. The rationale is simply that if individuals are involved in the communication of family history, and the therapist is able to generate an acceptable, generational, entrenched family pattern, then there might be hope that the adolescent is not singled out as the scapegoat.

The third, or structural dimension, details the organization of the family, including cohesion. It is a key assessment consideration that focuses on the appropriateness of proximity or distance of family members in the context of its developmental stage. For example, it is more appropriate and realistic for a parent and a three month old to be inseparable. It is much less appropriate for a parent to be as inseparable from a teenager. Identification of a problem utilizing the concept of structure is most helpful in that a therapist can often delineate the kind of rigid interactive patterns interfering with more adaptive functioning.

The final dimension reflects the search for interactional patterns within the system and is referred to as process. Transactional patterns such as enmeshment, conflict avoidance or conflict diffusion are observed as well as the therapist's own response patterns as she intervenes in the family process. The purpose of identifying the problem and the communication patterns is to outline a strategy for brief intervention, optimizing the conditions for rapid change.

Fishman's approach to assessment is clear enough. However, although there is mention of the families' underlying structure or cohesion and interactional patterns of communication, a more systematic and extensive elaboration of these constructs is found in the Circumplex Model of Family Systems. The following section provides a description and evaluation of this assessment heuristic.

Olson's Circumplex Model Of Marital and Family Systems

The Circumplex Model of Marital and Family Systems (Olson, Russell, & Sprenkle, 1989) is an attempt to integrate systems theory with normal individual and family development. This seems to be a particularly useful means of monitoring the key process issues common to the adolescent family unit; autonomy and control, as well as individuality and tolerance of differences (Worden, 1991). As such, it provides a typology for classifying families and emphasizes three dimensions of family behaviour: (1) cohesion; (2) adaptability; and (3) communication.

Family cohesion dimension.

The cohesion dimension refers to the emotional bonding (individuation and connectedness) that family members demonstrate towards one another. Included in this factor are variables such as family boundaries, coalitions, involvement with friends, decision-making, interests and recreation. Four levels of cohesiveness are explicated ranging from disengaged (very low) to separate (low to moderate) to connected (moderate to high) to enmeshed (very high). Olson hypothesized that disengaged families have emotionally distant members; emphasis is on personal autonomy and minimal involvement among individuals. One's emotional life often occurs outside of the family. At the other extreme, the enmeshed family does not tolerate extra-familial emotional involvement. Family loyalty is demanded at the expense of individual autonomy. According to this model, the two central levels of cohesion, notably separated and connected, permit a balance which allows individuals to experience independence within the context of family attachment. This proposition is similar to the one proffered by Grotevant and Cooper (1985) as discussed earlier in the section on the life cycle of the adolescent family.

Family adaptability dimension.

The ability to balance change and stability or adaptability is defined by Olson as a family's capacity to alter its power structure, role relationships, and relationship rules in response to developmental and situational stress (Olson, et al., 1983). Family power (assertiveness, discipline control), negotiation style, role relationships, and relationship rules constitute the level of adaptability. Similar to the cohesion dimension, four levels of adaptability are conceptualized. Very low adaptability (rigid) is represented by a resistant authority structure, unable to adapt to inevitable change. Typically, it is one parent who is excessively controlling and who establishes the rigid rules (Worden, 1991). At the other extreme, very high adaptability (chaotic) characterizes families with a marked absence of leadership and executive control. Consequently decisions are more impulsive and inconsistent, suggesting a fragile balance of functioning. More in the mid-line range, a balanced family is able to adapt when necessary and to resist change that is not beneficial to the system.

Family communication dimension.

The communication skills envisioned by this dimension enables members to shift along the above mentioned dimensions. The authors of this model claim that communication is the mechanism families utilize to share their changing feelings, needs, and preferences (Barnes & Olson, 1985). For instance, positive communication skills (empathy, reflective listening, supportive feedback) fosters a sense of sharing, thus permitting resolution of difficulty along the dimensions of adaptability and / or cohesion. Negative communication skills (criticism, sarcasm, double messages) discourages family sharing thereby interfering with ability and desire to change the level of cohesion and adaptability. Overall then, the communication dimension is viewed as the facilitating dimension of the Circumplex Model.

What are the implications of this model to adolescent autonomy and identity development within a healthy or functional family context? To recap briefly, I have argued that ego development is an intrapersonal process, yet occurs within the psychosocial construct of the family. Thus, family processes to some extent influence an adolescent's individuation and identity trajectory. If for example, a teen uses drugs, runs away from home or chooses not to practice safe sex, this may signal not only an adolescent's arrested ego development, but a blocked family transformation process. To demonstrate, imagine a teenager who disregards parental demands and continues to smoke and drink, not only at parties but during the day. His parents also consume large quantities of alcohol on a daily basis, notably to relax after work. They claim that they just have a few drinks in order to unwind and also to be able to handle their son's attitude problem. As a consequence of the son's blatant disobeying, which irritates the parents, and frequent parental intoxication, which disturbs the son, family communication is compromised. Equally thwarted is the adolescent's ability to utilize his parents as effective mirrors, further compromising his ego development. The parental system is also directly affected. Destructive arguments between the parents as to how to discipline the son fosters resentment, resulting in more argument and ineffectual communication patterns. The younger siblings in the family are traumatized by incessant fighting among the parents and with the teenage son. This general example offers some idea of the blocked transformation and interaction processes that might undermine an adolescent's identity formation, ego development, and parent-teen communication.

In one well documented review, Cooper, Grotevant, and Condon (1983) identified a set of communication patterns, or a transformation process, suggestive of both individuality and connectedness in the family unit. When family members were encouraged to construct their own point of view and to articulate it clearly and openly, individuality was enhanced. A family's openness, receptivity, and respectability of others' opinions promoted a sense of connectedness. With regard to adaptability and cohesion, Olson acknowledges that a healthy family exercises and is satisfied with a moderate level of cohesion and adaptability. When faced with a crisis or transition, a well functioning family will adapt by shifting its levels of cohesion and adaptability. So when one family member initiates change, as when an adolescent takes risks, the family is able to deal with the request.

Summary of Circumplex Model

In sum there are several hypotheses offered by the Circumplex Model which are useful for assessment and intervention. Olson (1989) summarizes these as: (1) More adequate family functioning will occur across the family life cycle for those families in which there is a balance on the adaptability and cohesion dimensions; (2) Balanced family types hold a larger behavioural repertoire capable of shifting along either dimension than extreme family types; (3) The family's response flexibility is increased by positive communication skills; (4) In response to life cycle demands and situational stress, families will need to shift on adaptability and cohesion dimensions (Worden, 1991).

Instruments used to evaluate families according to the Circumplex Model include the Circumplex Clinician's Rating Scale (CCRS) and the recently revised Family Adaptability and Cohesion Evaluation Scales (FACES-III) by Olson, Portner, & Lavee (1985). It is beyond the objective of this discussion to analyze these specific instruments. However, for a in-depth commentary on their reliability and validity, I refer the interested reader to Jacob, Tennen & Bawm, 1988). Suffice it to say that specific instruments are available to measure the constructs outlined in the theoretical model.

General Family Therapy Principles and Guidelines

In relation to the above discussion of the adolescent's intrapsychic, psychosocial and cognitive developmental issues, the corresponding life cycle and parental tasks and in consideration of Fishman's assessment model and the Circumplex Model, what are the therapeutic guidelines and implications for dealing with an adolescent-family system? First and foremost, flexibility and pragmatism should underlie any approach that treats an adolescent family. After reviewing two very different therapeutic approaches, Offer and Vanderstoep (1986) conclude:

> ... we do not believe that there is one type of psychotherapeutic technique which is applicable to most adolescent problems. There are many variables which have to be considered, including the value system of he patients ... A firmly developed therapeutic alliance based on positive initial impressions (likability factor) is often more important than the type of intervention used (p. 156).

As well as being willing to try any number of techniques, the therapist must also be prepared to work quickly to create a more functional reality for the family. Much of the literature suggests a brief approach as adolescents grow and change very quickly (Fishman, 1988; Szapocznik and Kurtines, 1989). Furthermore, many issues of the family are related to potentially fatal behaviours such as drug abuse which demand immediate attention.

It is also critical to recall the fundamental principles of a family system as explicated by Bateson (1978) Haley, (1968), Minuchin (1974), and Watzlawick, Beavin, and Jackson, (1967), in which the family is seen as an organized whole, made up of independent parts or subsystems. The first principle is that individual behaviours do not occur in isolation but in the context of the system in which the individual finds himself. Thus a holistic perspective will help to understand the behaviour of the individual and the family. The other basic principle is that both family and individual behaviour are viewed as interactive, circular, and interdependent. The implication is that all individuals and subsystems contribute to maintaining the system's interactions. This is referred to as the principle of complementarity. Based on this principle, behaviour change in one part of the family system will affect adjustment or change in other parts of the system (Szapocznik & Kurtines, 1989).

Another tenet of the family systems theory is that the family is characterized by homeostatic states, which maintain and regulate existing family patterns and resist change in the balance of power. The family also displays morphogenic qualities which facilitate change.

Family boundaries also plays a role in understanding the mechanisms through which a system operates. These boundaries are generally flexible and permeable, yet governed by tacit rules, roles and transactional patterns. As a function of changes in the life span cycle and work, school and community, boundaries will accommodate to the current needs of the family. However, It is often the repetitive, habitual patterns of interaction which do not change that creates or maintains a family *problem*.

With these principles in mind, it is the premise of this section that a matching process also be considered when determining an effective method of family treatment. Factors common to this matching process include; the nature of the presenting problem, the level of individual and family development; and the motivation for therapy (Worden, 1991). More specifically related to families who present with concern or exasperation over their risk-taking teenager, recall that knowledge of the type, extent, and degree of the risk-taking behaviour, the identity status of the adolescent, the developmental station of the adolescent-family collectively could be useful as a vital component of the assessment process. Further information gleaned from the assessment naturally directs the therapeutic intervention. A drug overdose will necessitate hospitalization, medical, and psychiatric follow up. Less health compromising problems such as conflicts over choice of friends or curfew restrictions may be resolved with parental education and supportive suggestions. In addition, a developmental history will reveal if and how an adolescent has traversed earlier developmental demands. Finally, the family's level of motivation will ultimately determine compliance, length of treatment, and outcome.

Useful structural family therapy techniques for working with adolescents and their families are identified as boundary making, enactment, unbalancing, reframing, intensifying, and searching for competence. Of all of the techniques mentioned, boundary making seems the most closely related to the issue of adolescent autonomy. The therapist can help directly, by monitoring membership of family members to particular subsystems. As well, the therapist might coach an adolescent to set boundaries between himself and his parents, particularly when conflict emerges between the parents. The parents will have to deal with the conflict within their own subsystem and the son will have effectively established a more solid boundary.

Enactment serves to demonstrate in session, the interactional patterns common to the family. At least three steps are involved in this process. The therapist first observes the interactions as they naturally occur. Following this, the therapist orchestrates a scenario in which the dysfunctional interaction is played out. Finally, she challenges the system by increasing the intensity, with the intention of replacing unproductive transactions with more functional patterns. This technique is considered a powerful means of inducing immediate and more long lasting change, as it occurs during session. Consider the same example of the son who defies his parents and continues to drink alcohol during the day and at parties. Using an enactment strategy the therapist might ask the family to argue, in session about the son's misbehaviour just as they would at home. After listening to the son, mother and father debate and defend their respective positions, the therapist would step in to intensify the argument and to direct the structure of the family transactional sequence. For instance she might first comment on the obvious win by the father who was verbally able to silence his son. Next, she might align herself with the adolescent and help him to verbalize his concern about his parents drinking and express his desire to drink in order to be popular with friends. She might also comment on the wife's physical positioning close to her husband and her ability to side with her husband. The therapist might then, offer the wife both a different chair, perhaps one closer to her son, and alternative suggestions as to how to voice her own opinion. All of these strategies are designed to point out to the family how they are communicating and guide them in alternative, more functional ways of communicating.

Unbalancing is another restructuring technique designed to upset the usual family organization. After joining with the family, the therapist may align herself with a weaker subsystem or individual in order to strengthen his or her perceived lack of power. The therapist may also choose to form a coalition with certain family members to confront another member. This can be quite tricky when working with adolescents as she may have to be seen as supporting both the parents and the adolescent. Related to the technique of unbalancing is reversals. This technique is intended as a means of changing habitual patterns of interactions. For example, the adolescent is coached by the therapist to respond in a manner opposite to her usual response. If a teenager typically responds to his father by fighting back when he yells about his late arrival, the teenager may be coached to respond by saying "Dad I get very frightened when you yell like that."

As a means of offering a new alternative to how the family views itself, the technique of reframing is often employed. It is intended to disrupt old perceptions and realities, thereby allowing for the possibility for change. For example if a father who berates his son for drug use and truancy is wanting to create a new sense of the problem for the son who feels rejected, she might say to the father "I can see that you are very concerned about your son and worried about his future."

Homework tasks are often given to the family to strengthen the interactions practiced in session and to promote generalization of the emerging patterns. Often, whether or not the homework is completed is an indicator of the level of family resistance to therapy. Resistance to therapy is a challenge facing most therapists, as families remain desperate to maintain the status quo. Resistance, too can be addressed vis a vis the structural, strategic systems framework. Szapoznick and Kurtines (1989) highlight the key to moderating resistance is in eliminating the resistance in the family structure. In effect, the therapist engages in the process of joining and restructuring, similar to the techniques used during therapy. Critical to the success of this process is having the therapist and family members collaborate and agree on a goal. Even when family members are in conflict over their objectives, it is essential that each identify some gain to be achieved in the course of therapy.

In conclusion, the lens through which family therapy has been viewed is a compilation of psychodynamic, structural, and strategic systems theories within a brief or short term modality. Essentially, it follows a problem based approach focusing on the families' former ineffective solution attempts and the rules by which they were constructed. Circularity, reciprocity, and complementarity are fundamental tenets of this therapy.

It must be kept in mind that although this approach attempts to consider the entire family unit, other social contexts such as peer groups play a determining role in the development of an adolescent. So, it is conceivable that a therapist might consider the possibility of including one's peers in the therapeutic alliance, as well as consulting with school teachers, grandparents, or extra-familial mentors.

Much was said in this discussion regarding the developmental tasks of adolescents and the corresponding tasks of parents. As we learned in this chapter, individual biopsychosocial and personality characteristics operate within the social context of the family. Further, the quality of the parent-adolescent relationship which helps to shape adolescent maturation, relies on the reciprocal nature of communication patterns, and the dimensions of adaptability and cohesion within the family milieu. These factors, highlighted vis a vis Olson's Circumplex Model of family functioning must be considered equipotent when treating the adolescent-family system. Moreover, each of the multifaceted variables should be factored into a basic understanding of adolescent risk-taking behaviour.

In recognizing the complex nature of the psychology of the adolescent and adolescent-family stage and being aware of the limited number of controlled outcome studies in the literature, rather than promoting one family therapy approach over another, an attempt was made to draw valuable techniques from well developed models within the family systems theoretical framework. Resistance to therapy in the form of an ambivalent, negative adolescent or a controlling parent highlighted the difficult task for the therapist and reinforced the need for flexibility and perseverance.

In closing, beginning therapists will do well to remember that we must acknowledge the adolescent's active search for autonomy and individuation as well as recognize the needs and developmental station of the entire family unit. Furthermore, in our efforts to deal with the problems associated with adolescent risk-taking, it is hoped that therapists entertain the ideas put forth in this and previous chapters. Notably, I reiterate that adolescents who take risks must not immediately be labeled pathological or dysfunctional. I also contend that much of risk-taking is normative, typical, even resourceful, and performed in a purposive effort to realize an independent identity and to meet the heightened demands of adulthood. Care must be taken, then, to determine as best as possible, the type, extent, and degree of expressed risk behaviour, what purpose the risk might serve, as well as establishing an adolescent's underlying personality and identity status. In short, normalizing adolescent risk behaviour for the family in therapy, and pointing out the possibility of positive as well as the obvious negative consequences of risk-taking, might well be the most useful first steps in working with this system in transition.

CHAPTER 6

Integrative Commentary on Adolescent Risk-Taking

General Overview of Theories and Empirical Research

A large number of adolescents engage in various forms of risk-taking including drug and alcohol use; drinking and driving; and early, unprotected sexual intercourse. Social policy makers, health care practitioners, teachers, and parents are among the many who are keenly interested in knowing why teens take risks. Notably, they are concerned about what can be done to alter this propensity to engage in activities which may have deleterious, long term health consequences.

Widely accepted theories of adolescent risk behaviour have categorized risk-taking as a manifestation of intrapersonal psychopathology (Coleman, 1987), a widespread reaction to the breakdown of social and family values (Baumrind, 1985), a reflection of peer group social deviance (Dryfoos, 1990), cognitive immaturity (Arnett, 1990), or the result of biologically determined sensation-seeking (Arnett, 1992). Referential terms commonly used by developmental theorists and clinicians to describe behaviours that have uncertain outcomes include *problem behaviours* (Jessor & Jessor, 1977) and *reckless behaviours* (Arnett, 1990). Others describe risk-takers as troubled or delinquent. In short, the overall portrait of an adolescent who engages in risks is rather bleak.

Much research has been done to investigate antecedents and determinants of risk behaviour. This intensive interest has recently led to the suggestion that, along with risk factors, protective factors may influence risk-taking. As a result of countless multidisciplinary investigations, contributors from education, sociology, psychiatry, anthropology, and medicine have identified a host of interrelated factors associated with the complexities of adolescent risk-taking. For example, according to Jessor (1992), there are five sources that contribute to adolescent problem behaviour including biology or genetics, the social context, personality, the perceived environment, and behaviour. A genetic risk factor such as alcoholism, a social environmental risk factor such as belonging to an ethnic minority or impoverished family, a personality risk factor such as low self-esteem, and a lifestyle factor such as drinking behaviour collectively contribute to the likelihood of adolescent risk-taking.

Other correlates found to be associated with risk behaviours include social and personal unconventionality, low religiosity, and high tolerance for deviance. Further, limited reliance on parents and more reliance on peers when forming decisions, placing less value on academic achievement and greater value on independence are linked to risk-taking (Donovan & Jessor, 1985; Lavery, Siegel, Cousins, & Rubovits, 1993).

Theorists have also suggested that the personal and social alienation suffered by adolescents as a result of living in a chaotic, unstable North American culture have been instrumental in the rise of risk-taking by society's youth (Baumrind, 1985). For example, limited supervision by weak parental role models, excessive involvement in deviant peer groups, poor economic prospects, and the extended period of adolescent moratorium contribute to risk-taking. Yet others have proposed personality characteristics such as sensation-seeking, cognitive factors such as egocentrism, imaginary audience, and personal fable to account for reckless behaviour (Arnett, 1992).

One of the more significant findings in the area of risk behaviours within the last decade has been the identification of a syndrome of risk behaviours that covary within individuals (Irwin & Millstein, 1992). In other words, behaviours such as early sexual activity, substance use, drinking and driving generally co-occur and have most likely occurred well before 16 years of age (Jessor & Jessor, 1977; Irwin & Millstein, 1992). The notion of a constellation of risk behaviours does establish the likelihood of common underlying mechanisms causal to or at least contributing to the onset and maintenance of risk-taking. Thus ,it is probable that the developmental trajectory of adolescence plays a significant role in the expression of risk. For example, certain behaviours precede other behaviours; smoking cigarettes tends to occur in early adolescence and is often followed by experimentation with other unhealthy substances, notably alcohol. As well, substance use generally precedes the onset of sexual behaviour (Irwin & Millstein, 1992).

Adolescent Drug Use Reviewed

Researchers have not been very successful in providing a clear understanding of smoking, drug, and alcohol use among teens. This seems primarily to be a result of confusion about the terms drug use and drug abuse. Precursors for drug use are more a function of social and peer factors, while risk factors associated with abuse are more multidimensional. For instance, the sheer number of risk factors for use may contribute to abuse. Early age of onset, high frequency of use, a family history of substance abuse, and individual psychopathology are among the many influences for drug abuse. Unfortunately, many investigators use both terms interchangeably when reporting findings from research studies. Clearly there is a notable difference between a teenager who experiments occasionally or infrequently with drugs and one who is a chronic, habitual, consumer of substances. In addition researchers do not often classify substances as licit or illicit which further confuses the issue. Moreover, little agreement is reached by those who report the patterns and incidence of drug use in adolescence. For example some researchers firmly believe that drug use is increasing at an alarming rate, especially within very young teenage populations (Pagliaro & Pagliaro, 1993). More specifically, a number of researchers have found that cocaine is rapidly becoming the drug of choice for many teenagers (Semiltz & Gold, 1986; MacDonald, 1987). In contrast, others have reported that, excluding alcohol, drug use has leveled off or declined (Bibby & Poterski, 1992), across Canada.

Much of the investigative process has involved the use of large scale national surveys in determining epidemiological trends, which although informative, does not provide the rich detail of longitudinal or phenomenological studies. For a review of current Canadian drug use trends, I refer the interested reader to the work by Bibby and Poterski (1992) and to Health and Welfare Canada (1991) for recently reported statistics. Comparative American demographic trends are reviewed by the American Medical Association (1990) and Pentz (1994).

In general, most of the literature proposes that drug use is a risk behaviour affecting many teenagers and which must be ameliorated. Few comment on the possible psychosocial benefits of experimenting with drugs for the adolescent or for society.

Adolescent Sexual Risk-Taking Reviewed

The literature on adolescent sexual risk-taking is not much clearer. As with drug behaviour, sexual risk taking such as unprotected intercourse or intercourse with multiple partners, involves a complex interrelationship among demographic, biological, social, and psychological variables (Irwin & Shafer, 1991). However, a prototypic sketch of a teenager who is likely to engage in early sexual risk-taking is not easily discernible given the innumerable factors thought to be involved in teenage sexual activity. Similar to drug use, researchers report contradictory findings regarding incidence of pregnancy, rates of abortion, and contraceptive use patterns. Again this occurs, in part as a result of inconsistent research methodology and the use of non-representative adolescent samples. For instance, when investigating contraceptive use patterns, researchers will often categorize contraception as use or non-use and neglect to qualify the efficacy of each chosen method. This makes it difficult to generalize findings across studies. Adolescent self-report measures have reliability limitations, often as a result of fear of parental or peer reprisal or even self-denial. Many samples are chosen from health care or psychiatric treatment facilities, further compromising generalizability to normative adolescent populations.

Overshadowing the difficulties in interpreting adolescent sexual behaviours are the prevailing North American moral attitudes about sexuality. Many parents have a difficult time discussing sexual issues with their children, if they attempt to communicate on the topic at all. In turn, teens favour their peer groups as informants, and they may not possess accurate information. As well, teenagers receive mixed messages from adult role models. For example, sexual images are constantly blasted forth from television videos and popular music. Yet discussion of sexual issues for the most part remain taboo. Untangling moral values from health concerns appears necessary in order to teach adolescents about sexuality and sexual practices. However, that alone will not necessarily alter teenage sexual decision-making; nor will the dissemination of factual knowledge about reproductive processes and methods of contraception. Although much has been discovered about adolescent sexual development and sexual practices, to date the complexities of sexual risk-taking have not been completely uncovered. Again, sexual risk behaviour is commonly reported to be on the increase, with pregnancy reaching epidemic proportions (Dryfoos, 1990; American Medical Association, 1994). As with the drug use literature, there is scant support for the idea that sexual experimentation, regardless of outcome, may function as an adaptive, healthy exploratory process.

Towards an Alternative View of Adolescent Risk-Taking

All of the research efforts should be acknowledged for attempting to account, in some way for risk behaviour. In spite of the difficulties and methodological limitations inherent in studying adolescent populations, empirical and theoretical support has been generated for many of the above mentioned variables. Several of the findings support the belief that most forms of risk are done largely due to ignorance of probable negative outcomes, to just have fun, to defy parental authority, to impress peers, or to alleviate personal or social anxiety. These are valid, reasonable explanations.

However, it is my contention that a very large void exists in the extant adolescent risk-taking literature. In particular, there is little research attention given to examining the idea that much of adolescent risk behaviour is healthy, adaptive, and industrious. Further, not much is said about risk-taking as a constructive means to what teenagers think is a positive end, namely autonomy and identity achievement. Having said that, I readily acknowledge that it becomes difficult to defend this position when others ask how experimentation with heroin or unprotected intercourse among a needle sharing peer group is healthy. One can see why then it is not a popular idea among researchers or lay persons.

My argument is simple. If we are to better understand the Umwelt or world view of contemporary youth, we must be willing to explore all possibilities when accounting for their attitudes, perceptions, motivations, and behaviour, not just those that view adolescents as somehow incompetent or impoverished. More than that, if we are to become better equipped to aid adolescents in constructing a more fitting definition of health, it is necessary to re-consider the whole notion of risk-taking in a more positive light. Given their limited formal operational capacity, we must be willing to appreciate their motivations, even if the immediate or long term outcomes are negative or unhealthy. Furthermore we must ask ourselves what role we, as adults, should play in fostering adolescent growth and facilitating their preparation for the responsibilities of adulthood.

My ideas are in the germinal stages of development. At present, they are simply following a hopeful direction. In formulating my thoughts on the subject of adolescent risk-taking, I rely on the well respected ideas of Maslow (1971) who suggests that humans are continually searching to self-actualize. Why would adolescents be any different than the rest of humankind? Why would we assume that their efforts, albeit often unconventional, seemingly irrational, and possibly health endangering are any less purposive or positively intentioned than more sanctioned behaviour?

I readily accept and welcome the notion of pathology in adolescent psychosocial development for it serves as a benchmark from which to gauge health and illness. However, I ask that we do not routinely categorize adolescents who take health compromising risks, as pathological or dysfunctional, nor be too quick to use similar terms to describe what I believe to be healthy, exploratory, identity and autonomy-searching adolescent coping behaviours. For example, drinking with peers during a party may be one way an adolescent actively explores the adventurous or defiant part of his developing character. Purposively disregarding parental rules not to drink is an example of an adolescent who is seeking autonomy. More conventional risk-taking such as ear piercing when parents have objected to the act may also be viewed as a positive risk behaviour; for challenging parental views is one way of marking individuality. Choosing to wear make up or selecting a new wardrobe without parental assistance may also be seen as a means of coping with societal and peer expectations and a way of expressing autonomy and creativity. Another risk behaviour exemplifying teenage social coping skills might be the act of smoking in order to be accepted by peers. Rebelling against the pressure to conform to school regulations, skipping classes, or being late is another illustration of an attempt to define the parameters of a developing identity. In the context of self-discovery and in relation to the development of self in relationship to others, adolescents must not be discouraged from engaging in some form of risk-taking. Whether it is an act as simple as taking a bus when usually they are driven to school or as health endangering as experimenting with marijuana, teenagers should be encouraged to test their personal boundaries, to challenge authority, to resist conforming for its own sake, and to experiment with all sorts of different behaviours. It is this process which lends itself to identity achievement, as well as psychosocial, sexual, and emotional maturation.

It is that premise which has guided my interest in the use of family therapy to treat families with adolescents; in particular, families who struggle with risk-taking teenagers. I am especially concerned that beginning therapists who encounter adolescent-families for the first time must have an appreciation of the vast number of variables involved in adolescent risk behaviour. Moreover, I believe that if they follow the more widely accepted view that risk-taking serves little in the way of benefit to an adolescent, subsequent therapeutic intervention may not be in the best interest of the adolescent's psychosocial growth. In promoting the idea that adolescents' motivation to engage in risk behaviours is in the interest of self-discovery and with the possibility of healthy outcomes, it is my hope that family therapists may be better able to effectively treat their clients.

Many families who come for therapy expect the therapist to fix their uncontrollable, unappreciative adolescents, figuring that any demonstration of reckless, problem, or risk behaviour is symptomatic of grave psychopathology. This position is often verified by the interplay of the vast psychological, biological, social, and emotional changes evidenced by an adolescent. Adding to the confusion is the nature of the parental relationship, and the family's existing communication patterns. It is critical that families with adolescents be instructed about the many developmental tasks of this transitional period. So often central issues of autonomy, independence, vis a vis simple exploration and experimentation go unrecognized. Too many times parents are concerned about a teen's misbehaviour but fail to see some of the normal, typical reasons underlying its expression.

Assessment and intervention can take many forms. In my mind, a family systems perspective seems most feasible when re-negotiating adolescent-parent relationships. This is basically because within a systems approach, families are viewed as an organized whole, made up of independent parts or subsystems, each equipped with certain boundaries and governed by tacit roles, rules, degrees of power, and transactional patterns (Nichols & Schwartz, 1991). For instance, a father who only pays attention to his teenage son when he comes home late after drinking and driving, may be encouraging his son to engage in the same risky behaviours in order to receive the father's limited, but negative attention, to assert his newly developing independence, and to defy parental control.

In another instance, an overprotective mother who is suspicious of her daughter's friends and discourages involvement with choice of peers, may be surprised to learn that, in order to assert autonomy and independence, and to challenge parental rules and boundaries, her daughter is dating and having unprotected intercourse with several older men.

To assist beginning therapists in the family assessment process, I suggest that they make use of the few assessment tools available. Two models that attempt to integrate systems theory with normal individual and family development are Fishman's (1988) model of assessment and the Circumplex Model of Marital and Family Systems (1989). Both methods review the developmental issues of the family, its history, structure, and communication process. The Circumplex Model, however, provides a more systematic evaluation of key processes common to the adolescent-family unit (Worden, 1991). Moreover, it offers a typology for classifying families along the dimensions of: cohesion, adaptability, and communication.

In addition to using the assessment models, I recommend that family therapists keep in mind the central tasks of adolescence, notably autonomy and individuation. Furthermore, with respect to a teenager who is engaging in risk behaviours, I recommend that therapists be alert to the variables associated with risk-taking. Further, it is in the interest of all members of the family to capture each one's perception of the risk behaviour. No doubt the primary issues for the parents will be the health implications. However, it is also important to hear what the adolescent might have to say about his or her behaviour. It will not be an easy task to determine the value, positive or negative, from the teenager's actions, particularly if they are unable or unwilling to articulate why they smoke or drink, or have intercourse without contraception. One way that the therapist might facilitate the process is to find out the type, degree, and extent of risk-taking. In addition, the therapist might determine the identity status of the adolescent. Marcia (1966) has formulated an identity status model in which adolescents are distributed over four specific identity statuses. They are labeled identity diffusion, foreclosure, identity achievement, and moratorium. Within this paradigm, adolescence is a period experienced by identity crisis which is solved by making choices about the future (Meuss, 1992).

The identity diffused adolescent has not yet made a choice about regarding a specific developmental task and may not have experienced a crisis. It is the stage of identity that is viewed as the least developmentally advanced status (Patterson, Sochting, & Marcia, 1992) and manifested by "a diffuse mixture of depression, acting out, and bewilderment" (Mitchell, 1992). Mitchell goes further, claiming that it "is a deterioration of the entire personality. It represents a serious malfunction within identity formation" (p.152).

Conversely, moratorium youth are considered to be actively searching for and exploring commitments. It is sanctioned as time of active, directed, self-discovery and therefore considered normative. However, it is difficult to know how the corresponding behaviour of this status is different than the risk behaviour of a identity diffused adolescent. One could assume that, while identity diffused and moratorium youth may be engaging in similar risks with similar health outcomes, the underlying motives for the behaviour are likely very different. By way of interviewing adolescents about the extent, degree, and type of their risk behaviour and attitudes about risk-taking, it may help to determine an adolescent's current identity status and thus provide the therapist with a more comprehensive idea of his or her adolescent client's psychosocial and developmental health.

I have not been successful in uncovering any clinical research that uses the stages of identity status as a clinical tool in the assessment of risk-taking behaviour. However, it is my contention that the identity status model should be investigated as a heuristic in the treatment of families with adolescent risk-takers. I say this because in order to make effective, practical use of theory, we need to be able to link theoretical constructs to clinical application.

Suggestions for Future Research

A few general future research ideas that are designed to improve understanding of attitudes towards risk and risk behaviours in adolescents include the following. First, it is essential that researchers incorporate phenomenological (emotional and experiential) and prospective investigative methods into the study of adolescents. These approaches add invaluable social-ecological, and personal information to the extant risk behaviour knowledge base as well as extend the descriptive data provided by large scale survey methods. Second, interdisciplinary research should be encouraged in order to broaden the scope of our limited understanding of risk. Third, parents, teachers, mental health care professionals, medical practitioners together with teenagers should collectively attempt to answer the questions about adolescent risk-taking that are plaguing researchers and social policy makers alike. Finally, I would like to see the development of family therapy assessment models that recognize the value of adolescent identity formation status, incorporating the identity status of an adolescent into the process of evaluating adolescent risk-taking and family functioning.

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